STATE OF UTAH
SOUTHERN UTAH UNIVERSITY

State of Utah-Department of Administrative Services

DIVISION OF FACILITIES CONSTRUCTION
AND MANAGEMENT

4110 State Office Building - Salt Lake City, Utah 84114 - 801-538-3018

PROFESSIONAL ENGINEER
No 5387000-2202
JOEL L ANDRUS
6-14-2010
STATE OF UTAH

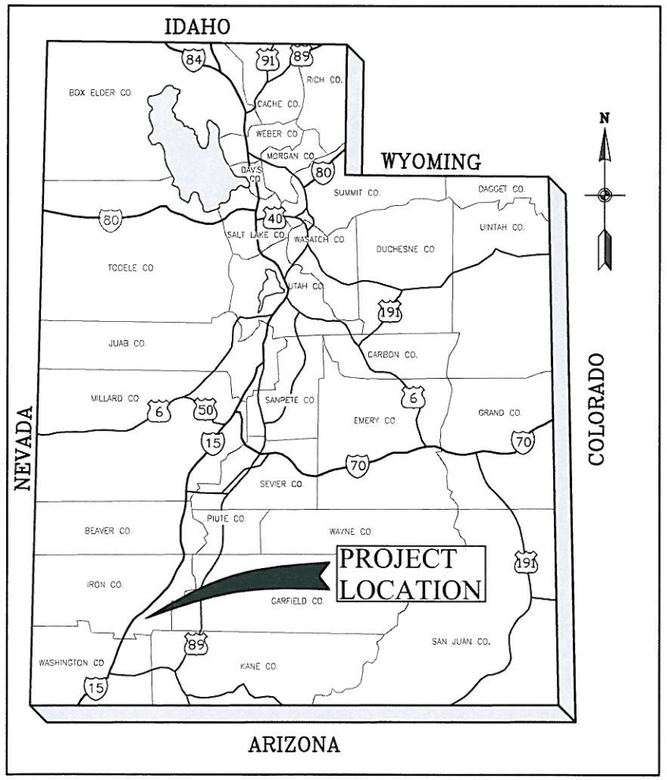
INTRAMURAL SOCCER FIELDS

DFCM PROJECT # 10058730

DRAWINGS FOR CONSTRUCTION OF

INTRAMURAL SOCCER FIELDS

SOUTHERN UTAH UNIVERSITY



PROJECT LOCATION MAP

INDEX OF DRAWINGS			
SHT NO.	DWG NO.	DESCRIPTION	CAD FILE NAME
		GENERAL	
1	G-1	PROJECT LOCATION MAP, INDEX TO DRAWINGS AND VICINITY MAP	1451001_G-01.dwg
2	G-2	SYMBOLS	1451001_G-02.dwg
3	G-3	ABBREVIATIONS	1451001_G-03.dwg
4	G-4	GENERAL NOTES	1451001_G-03.dwg
		CIVIL	
5	C-1	SITE DEMOLITION	1451001_C01.dwg
6	C-2	PROPOSED SITE IMPROVEMENTS	1451001_C02.dwg
7	C-3	IRRIGATION PLAN	1451001_C03.dwg
		DETAILS	
8	D-1	DETAILS - 1	1451001_D01.dwg
9	D-2	DETAILS - 2	1451001_D02.dwg
10	D-3	DETAILS - 3	1451001_D03.dwg
11	D-4	DETAILS - 4	1451001_D04.dwg
12	D-5	DETAILS - 5	1451001_D05.dwg
13	D-6	DETAILS - 6	1451001_D06.dwg
14	D-7	DETAILS - 7	1451001_D07.dwg

VICINITY MAP

BOWEN COLLINS & Associates, Inc. Consulting Engineers

REGISTERED PROFESSIONAL ENGINEER
6387000-2202
JOEL L. ANDRUS
STATE OF UTAH
6.14.2010

REVISIONS

NO	DATE	REV BY	DESCRIPTION

DFCM
INTRAMURAL SOCCER FIELDS
CEDAR CITY, UTAH

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

DESIGN J. ANDRUS
DRAWN B. ABEL
REVIEW K. BAGLEY
CHECKED
APPROVED J. ANDRUS

GENERAL
PROJECT LOCATION MAP, INDEX OF DRAWINGS AND VICINITY MAP

DATE JUNE 2010
PROJECT NUMBER 145-10-01

DRAWING NO. G-1
SHEET 1 OF 14

P:\SUU\sht\1451001_G-01.dwg Jun13,2010 - 8:26pm

(1) DETAIL IDENTIFICATION SHOWN ON DRAWING AS:

DETAIL NUMBER → 3 / R-M-03 ← DRAWING NUMBER WHERE THE DETAIL IS SHOWN (SEE NOTE)

THE DETAIL NAME IS OPTIONAL AND LOCATED HERE, FOLLOWING DETAIL CALLOUT

(2) THIS DETAIL IS IDENTIFIED AS:

DETAIL 3 / R-M-02 (SCALE: AS DESIGNATED. SEE NOTE)

DETAIL NUMBER

DRAWING ON WHICH THE DETAIL CALLOUT IS LOCATED

NOTE:
IF PLAN AND SECTION (OR DETAIL CALL-OUT AND DETAIL) ARE SHOWN ON SAME DRAWING, DRAWING NUMBER IS REPLACED BY A HORIZONTAL LINE.

TYPICAL DETAIL IDENTIFICATION

DETAIL NAME — M / 3000

TYPICAL DETAIL NUMBER ON DRAWINGS WHERE DETAIL IS TAKEN AND SHOWN (SEE INDEX TO DRAWINGS FOR LOCATION OF TYPICAL DRAWINGS)

DRAWING IDENTIFICATION SYSTEM

LETTER	DISCIPLINE
G	GENERAL
C	CIVIL
A	ARCHITECTURAL
S	STRUCTURAL
M	MECHANICAL
H	HVAC
E	ELECTRICAL
I	INSTRUMENTATION & CONTROL
U	UTILITY
PP	PLAN AND PROFILE
D	DETAILS

S-2
- INDIVIDUAL DRAWING NUMBER
- DISCIPLINE

NOTES:

A. IF PLAN AND SECTION (OR DETAIL CALL-OUT AND DETAIL) ARE SHOWN ON SAME DRAWING, DRAWING NUMBER IS REPLACED BY A HORIZONTAL LINE.

B. PREFIX LETTER INDICATES THE FOLLOWING: C-CIVIL, L-LANDSCAPING, A-ARCHITECTURAL, S-STRUCTURAL, M-MECHANICAL, E-ELECTRICAL, I-INSTRUMENTATION.

C. ELECTRICAL SYMBOLS SHOWN ON ELECTRICAL SHEETS FOR WELDING SYMBOLS USE AMERICAN WELDING SOCIETY STANDARD SYMBOLS. SEE AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL.

D. IF SECTION AND/OR DETAILS ARE THE SAME SCALE AND ON THE SAME DRAWING, SEE TITLE BLOCK AT "SCALE:"; THE SCALE TEXT AT CALLOUT SHALL BE OMITTED.

- MASONRY
- CAST IRON
- STEEL
- BRONZE
- INSULATION
- GRAVEL
- CONCRETE
- EARTH
- SAND
- ALUMINUM OR METAL DECKING
- CHECKERED PLATE
- SPAN — GRATING
- PLASTIC, RUBBER OR NEOPRENE
- WOOD (FINISH)
- WOOD (ROUGH FRAMING) OR, OPENING OR DEPRESSION IN SLAB OR WALL
- 12 X 24 / 24 X 12 — DUCT (FIRST DIMENSION DUCT SIDE SHOWN, SECOND DIMENSION DUCT SIDE NOT SHOWN)
- SUPPLY OR OUTSIDE AIR DUCT (FIRST DIMENSION, DUCT WIDTH)
- 24 X 12 — EXHAUST OR RETURN AIR DUCT (FIRST DIMENSION, DUCT WIDTH)
- SIZE / CFM — CEILING SUPPLY DIFFUSER (SIZE IN INCHES)
- SIZE / CFM — CEILING RETURN OR EXHAUST AIR GRILLE OR REGISTER (SIZE IN INCHES, WIDTH X HEIGHT)
- SIZE / CFM — EXHAUST OR RETURN AIR GRILLE OR REGISTER (SIZE IN INCHES, WIDTH X HEIGHT)
- SIZE / CFM — SUPPLY GRILLE OR REGISTER (SIZE IN INCHES, WIDTH X HEIGHT)
- AIR TURNING VANES IN DUCT
- DD — DEFLECTING DAMPER
- FHC — FIRE HOSE CABINET
- FE — FIRE EXTINGUISHER
- UNIT HEATER
- CENTERLINE
- PROPERTY LINE
- NEW STRUCTURE OR FACILITY
- EXISTING STRUCTURE OR FACILITY
- FUTURE STRUCTURE OR FACILITY
- NEW FENCE
- EXISTING FENCE
- NEW PIPELINE (CIVIL SHEETS)
- NEW PIPELINE (CIVIL SHEETS) 10" DIA. AND SMALLER
- EXISTING PIPELINE

- 123 — CONTOUR LINE, FINISHED GRADE
- 123 — CONTOUR LINE, EXISTING GRADE
- 123.20 — FINISHED ELEVATION
- (123.20) — EXISTING ELEVATION
- TOP / TOE — CUT OR FILL SLOPE TO BE CONSTRUCTED
- NEW A.C. PAVING
- EXISTING A.C. PAVING
- RAILING
- FH — FIRE HYDRANT
- MH — MANHOLE
- PCOTG — PRESSURE CLEANOUT TO GRADE
- WCO / WCO — WALL CLEANOUT
- FCO / FCO — FLOOR CLEANOUT
- COTG / COTG — CLEANOUT TO GRADE
- BLOW OFF ASSEMBLY
- HUB DRAIN
- FLOOR DRAIN
- FLOOR SINK
- DRAIN TRAP
- SOIL BORING
- BENCH MARK
- VAULT OR JUNCTION STRUCTURE
- CHANGE IN PIPING MATERIAL
- ROUND OR DIAMETER
- SQUARE
- AT
- ANGLE
- 24" RCP-RW — PIPE SIZE AND TYPE/FLUID ABBREVIATION (USE FOR EXISTING PIPE CALLOUT)
- 2" UW (2) — PIPE CALLOUT (SEE PIPING SCHEDULE)
- ME-2 — EQUIPMENT NUMBER (SEE EQUIPMENT SCHEDULE)
- BACKWATER VALVE
- BACKFLOW PREVENTER
- STOP GATE
- SLIDE GATE
- SLUICE GATE
- MM — FILTER FLOW METER

- GATE VALVE, BURIED WITH VALVE BOX
- MUD VALVE
- BUTTERFLY VALVE, BURIED WITH VALVE BOX
- ECCENTRIC PLUG VALVE, BURIED WITH VALVE BOX
- LUBRICATED PLUG VALVE, BURIED WITH VALVE BOX
- GATE VALVE
- BUTTERFLY VALVE
- ECCENTRIC PLUG VALVE
- LUBRICATED PLUG VALVE
- GLOBE VALVE
- BALL VALVE
- DIAPHRAGM VALVE
- CHECK VALVE
- PRESSURE REGULATING VALVE
- BACK-PRESSURE VALVE
- M / P — MOTOR OPERATOR FOR VALVES (M = ELECTRIC, P = PNEUMATIC, H = HYDRAULIC)
- T — TEMPERATURE CONTROL VALVE
- S — SOLENOID VALVE
- MULTIPORT VALVE - 3 WAY
- MULTIPORT VALVE - 4 WAY
- FLOAT OPERATED VALVE
- NEEDLE VALVE
- PRESSURE RELIEF VALVE
- ANGLE VALVE
- DOUBLE LEAF CHECK VALVE
- BACKWASH AUTOMATIC CONTROL VALVE
- HOSE BIBB (H/B)
- B — BUBBLER LEVEL CONTROL
- CENTRIFUGAL OR TURBINE PUMP OR FAN
- METERING PUMP
- PROGRESSIVE CAVITY, POSITIVE DISPLACEMENT PUMP
- BLOWER OR COMPRESSOR
- INJECTOR OR EDUCTOR
- F/A — FLAME ARRESTER
- AIR VACUUM AND AIR RELEASE ASSEMBLY
- THERMOMETER
- PIPE ANCHOR

- T — ROOM THERMOSTAT
- PT — PRESSURE TRANDUCER
- PG — PRESSURE GAUGE
- PG — PRESSURE GAUGE WITH DIAPHRAGM SEAL
- PS — PRESSURE SWITCH
- PS — PRESSURE SWITCH WITH DIAPHRAGM SEAL
- FLANGED FITTING
- WELDED FITTING
- MECHANICAL-TYPE FITTING (GROOVED)
- SCREWED, SOCKET-WELD, BELL AND SPIGOT OR HUBLESS FITTING
- SLEEVE-TYPE COUPLING
- FLANGED ADAPTER COUPLING
- FLANGED ADAPTER - SET SCREW TYPE
- EXPANSION JOINT
- MECHANICAL TYPE COUPLING
- FLEXIBLE COUPLING
- UNION
- QUICK DISCONNECT COUPLER
- CAPPED END OR PLUGGED END
- BLIND FLANGE
- REDUCER OR INCREASER
- CUT PIPE
- STRAINER
- DRAIN
- FLOW TUBE
- M M — MAGNETIC METER
- D M — DENSITY METER
- P M — PROPELLER METER
- ORIFICE PLATE AND FLANGES
- ROTAMETER
- T — CONDENSATE TRAP
- PIPE SUPPORT (IN PLAN ONLY)
- CB — CATCH BASIN
- PULSATION DAMPENER
- AD — AREA DRAIN
- LIQUID SURFACE
- TURBIDIMETER
- PH/CHLORINE SENSOR
- FILTER PRESSURE GAUGE PANEL

BOWEN COLLINS & Associates, Inc. Consulting Engineers

PROFESSIONAL ENGINEER — 387000-2202 — JOEL L. ANDRUS — STATE OF UTAH — REGISTERED — 6.9.2010

REVISIONS

NO	DATE	REV. BY	DESCRIPTION

FIELDS

VERIFY SCALE — BAR IS ONE INCH ON ORIGINAL DRAWING

DFCM
INTRAMURAL SOCCER
CEDAR CITY, UTAH

REVIEW — CHECKED J. ANDRUS — APPROVED K. BAGLEY

DESIGN — DESIGN J. ANDRUS — DRAWN B. ABEL

SYMBOLS

DATE: JUNE 2010

PROJECT NUMBER 145-10-01

DRAWING NO. G-2

SHEET 2 OF 14

P:\SUU\shl\1451001_G-02.dwg Jun13,2010 - 8:28pm

@	AT
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY TRANSPORTATION OFFICIALS
AB	ANCHOR BOLT
ABBR	ABBREVIATION
ABS	ACRYLONITRILE–BUTADIENE–STYRENE
AC	ASPHALTIC CONCRETE OR ALTERNATING CURRENT OR ACTIVATED CARBON
ACI	AMERICAN CONCRETE INSTITUTE
ACP	ASPHALTIC CONCRETE PAVEMENT
ADDL	ADDITIONAL
ADJ	ADJACENT OR ADJUSTABLE
AER	AERATION
AFF	ABOVE FINISH FLOOR
AGGR	AGGREGATE
AH	AIR HANDLER
AIR CONT	AIR CONDITIONING
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AL	ALUMINUM, ALUM
ALTN	ALTERNATIVE, ALTERNATE
ANOD	ANODIZED
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APVD	APPROVED
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ARV	AIR RELEASE VALVE
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIAL
ASSY	ASSEMBLY
AUTO	AUTOMATIC
AUX	AUXILIARY
AVAR	AIR VACUUM AND AIR RELEASE VALVE
AWS	AMERICAN WELDING SOCIETY
AWWA	AMERICAN WATER WORKS ASSOCIATION
BC	BEGIN CURVE, BOLT CIRCLE
BF	BLIND FLANGE, BUTTERFLY VALVE
BFP	BACK FLOW PREVENTER
BFV	BUTTERFLY VALVE
BHD	BULKHEAD
BHP	BRAKE HORSEPOWER
BLDG	BUILDING
BLK	BLACK OR BLOCK
BLKG	BLOCKING
BLT	BOLT
BM	BEAM, BENCH MARK
BO	BLOW–OFF ASSEMBLY, BLOW–OFF
BOT	BOTTOM
BPS	BOOSTER PUMPING STATION
BPV	BACK PRESSURE VALVE
BRK	BRICK
B & S	BELL & SPIGOT
BTWN	BETWEEN
BTU	BRITISH THERMAL UNIT
BUR	BUILT–UP ROOFING
BVC	BEGIN VERTICAL CURVE
BW	BACK WASH, FILTER BACKWASH
C	CENTIGRADE OR CELSIUS
CAB	CABINET
CAP	CAPACITY
CARV	COMBINATION AIR RELEASE VALVE
CB	CATCH BASIN
CC	CENTER TO CENTER
CCP	CONCRETE CYLINDER PIPE
CD	CEILING DIFFUSER CHEMICAL DRAIN AND VENT
CER	CERAMIC
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
CG	CHLORINE GAS
CHBD	CHALKBOARD
CHEM	CHEMICAL
CHG	CHANGE
CHKD PL	CHECKERED PLATE
CI	CAST IRON
CIP	CAST IRON PIPE
CISP	CAST IRON SOIL PIPE
CJ	CONSTRUCTION JOINT
CJP	COMPLETE JOINT PENETRATION
CL	CHLORINATOR, CHAIN LINK, CLEARANCE, CENTERLINE OR CHLORINE
CLR	CLEAR
CLST	CEMENT LINED STEEL PIPE
CM	CENTIMETER
CML & C	CEMENT MORTAR LINED AND COATED
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COL	COLUMN
COMM	COMMUNICATION
COMB	COMBINED
CONC	CONCRETE, CONCENTRIC
COND	CONDENSER, CONDENSATE
CONN	CONNECTION
CONST	CONSTRUCTION, CONSTRUCT
CONT	CONTINUED, CONTINUOUS, CONTINUATION
COORD	COORDINATE
COTG	CLEAN–OUT TO GRADE
COP	COPPER
CPLG	COUPLING
CPVC	CHLORINATED POLYVINYL CHLORIDE
CS	CAST STEEL OR CAUSTIC SODA
CTRD	CENTERED
CTR	CENTER
CTSK	COUNTERSUNK
CU FT	CUBIC FOOT
CU IN	CUBIC INCH
CU YD	CUBIC YARD
CULV	CULVERT
CV	CHECK VALVE
CW	COLD WATER
CWO	CHAIN WHEEL OPERATOR
CYL	CYLINDER
d	PENNY
DBA	DEFORMED ANCHOR
DBL	DOUBLE
DC	DIRECT CURRENT
DET	DETAIL
DEG	DEGREE
DEMO	DEMOLITION, DEMOLISH
DI	DUCTILE IRON, DROP INLET
DIA	DIAMETER
DIAG	DIAGONAL
DIAPH	DIAPHRAGM
DIFF	DIFFUSER
DIM	DIMENSION
DIP	DUCTILE IRON PIPE
DISCH	DISCHARGE
DIR	DIRECTION
DIST	DISTANCE
DIV	DIVISION
D–LOAD	LOADING CONDITION FOR RCP
DMPR	DAMPER
DN	DOWN, DECANT
DOT	DEPARTMENT OF TRANSPORTATION
DP	DAMP PROOFING
DR	DOOR, DRAIN
DS	DRENCH SHOWER & EYE WASH, DOWNSPOUT
DWG	DRAWING
DWL	DOWEL
E(UG)	ELECTRICAL (UNDERGROUND)
E(OH)	ELECTRICAL (OVERHEAD POWER)
E	EAST
EA	EACH
EB	EXPANSION BOLT
EC	END CURVE
ECC	ECCENTRIC
EF	EACH FACE, EXHAUST FAN
EFF	EFFLUENT
EG	EXISTING GRADE
EL	ELEVATION, ELBOW
ELEV	ELEVATION
ELEC	ELECTRICAL, ELECTRONIC
EMB	EMBEDMENT
EMER	EMERGENCY
ENCL	ENCLOSURE
ENG	ENGINE
ENGR	ENGINEER
EP	EDGE OF PAVEMENT
EQ	EQUAL
EQL SP	EQUALLY SPACED
EQUIP	EQUIPMENT
ETC	ETCETERA
EVAP	EVAPORATOR
EVC	END VERTICAL CURVE
EW	EACH WAY, EYE WASH
EXH	EXHAUST
EXP ANR	EXPANSION BOLT, ANCHOR
EXP JT	EXPANSION JOINT
EXIST	EXISTING
EXT	EXTERIOR, EXTENSION, EXTERNAL
F	FAHRENHEIT, FACE
FAB	FABRICATION, FABRICATE, OR FABRICATED
FB	FLAT BAR
FC	FLEXIBLE COUPLING
FCA	FLANGE COUPLING ADAPTER
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FDN	FOUNDATION
FDR	FEEDER
FEXT	FIRE EXTINGUISHER
FF	FLAT FACE, FAR FACE, FINISH FLOOR
F TO F	FACE TO FACE
FG	FINISH GRADE, FLOW GLASS
FH	FIRE HYDRANT
FLR	FLOOR
FL	FLOW LINE
FLEX	FLEXIBLE
FLG	FLANGE
FND	FOUND
FNSH	FINISH
FO	FIBER OPTIC
FS	FLOOR SINK
G	GAS
GA	GAGE, GAUGE
GAL	GALLON
GALV	GALVANIZED
GEN	GENERATOR
GFI	GROUND FAULT INTERRUPTER
GI	GALVANIZED IRON
GIS	GEOGRAPHIC INFORMATION SYSTEM
GL	GLASS
GLAZ	GLAZING
GLV	GLOBE VALVE
GND	GROUND
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR	GRADE
GR BRK	GRADE BREAK, GRADE CHANGE
GRTG	GRATING
GV	GATE VALVE
GSP	GALVANIZED STEEL PIPE
GYP	GYPSUM BOARD
H	HEIGHT
HAS	HEADED ANCHOR STUD
HB	HOSE BIBB
HD	HUB DRAIN
HDPE	HIGH DENSITY POLYETHYLENE
HDR	HEADER
HDW	HARDWARE
HEX	HEXAGONAL
HGR	HANGER
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HORSEPOWER, HIGH PRESSURE, HEAT PUMP
H/P, HPT	HIGH POINT
HR	HEATING RETURN, HOUR, HOSE RACK
HS	HIGH STRENGTH
HTG	HEATING
HTR	HEATER
HV	HOSE VALVE
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
HWL	HIGH WATER LEVEL
HWO	HANDWHEEL OPERATED
HYD	HYDRANT, HYDRAULIC
ICFM	INLET CUBIC FEET PER MINUTE
ID	INSIDE DIAMETER
IF	INSIDE FACE
IN	INCH
IN LB	INCH–POUND
INFL	INFLUENT
INSUL	INSULATING
IE	INVERT ELEVATION
INVT	INVERT
IPS	IRON PIPE SIZE
IRR	IRRIGATION
JT	JOINT
K	KELVIN, KILO OR THOUSAND POUNDS
KG	KILOGRAM
KV	KILOVOLT
KW	KILOWATT
KWH	KILOWATT HOUR
L	LEFT OR LITER
LAB	LABORATORY
LAV	LAVATORY
LB	POUND
LC	LENGTH OF CURVE
LF	LINEAR FEET
LG	LENGTH OR LONG
LH	LEFT HAND
LL	LIVE LOAD
LLV	LONG LEG VERTICAL
LOL	LENGTH OF LINE
LPT	LOW POINT
LR	LONG RADIUS
LT	LIGHT, LEFT
LVL	LEVEL
LWL	LOW WATER LEVEL
LWR	LOWER
M	METER, MALE (PIPE THREAD)
MACH	MACHINE
MAN	MAGNETIC
MAN	MANUAL
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL, MECHANISM
MEMB	MEMBRANE
MET	METAL
MFR	MANUFACTURER
MG	MILLION GALLONS
MGD	MILLION GALLONS PER DAY
MH	MANHOLE, MONORAIL HOIST
MI	MALLEABLE IRON
MID	MIDDLE
MIL	1/1,000 INCH
MIN	MINIMUM OR MINUTE
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MTL	METAL OR MATERIAL
MTG	MOUNTING
MTR	MOTOR
MPH	MILES PER HOUR
MWS	MAXIMUM WATER SURFACE
N	NORTH
NAVD	NORTH AMERICAN VERTICAL DATUM
NBS	NATIONAL BUREAU OF STANDARDS
NC	NORMALLY CLOSED
NE	NORTHEAST
NEC	NATIONAL ELECTRIC CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURES ASSOCIATION
NF	NEAR FACE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NO	NUMBER OR NORMALLY OPEN
NOM	NOMINAL
NPT	NATIONAL PIPE THREAD
NS	NEAR SIDE
NTS	NOT TO SCALE
NW	NORTHWEST
OC	ON CENTER, OVER–CROSSING
OD	OUTSIDE DIAMETER, OVERALL DIMENSION
OF	OUTSIDE FACE
OH	OVERHEAD
OPER	OPERATOR, OPERATING
OPNG	OPENING
OPP	OPPOSITE
ORIG	ORIGINAL
O TO O	OUT TO OUT
OVHD	OVERHEAD
OZ	OUNCE
PV	PAVEMENT
PC	PORTLAND CEMENT, POINT OF CURVE OR PRIMARY CLARIFIER
PCC	PORTLAND CEMENT CONCRETE
PCF	POUNDS PER CUBIC FOOT
PG	PRESSURE GAUGE
PE	PLAIN END, POLYELECTROLYTE POLYMER, POLYETHYLENE
pH	HYDROGEN ION CONCENTRATION
PI	PRESSURE INDICATOR, POINT OF INTERSECTION
PJF	PREMOLDED JOINT FILLER
PL	PLATE, PROPERTY LINE, PLACE
PLYWD	PLYWOOD
PM	PUMP, PROPELLER METER
PI	POINT OF BEGINNING
PT	POINT OF TANGENT
PJF	PREMOLDED JOINT FILLER
PL	PLATE, PROPERTY LINE, OR PLACE
PP	POTASSIUM PERMANGANATE
PPD	POUNDS PER DAY
PPH	POUNDS PER HOUR
PPM	PARTS PER MILLION
PR	PAIR
PRC	POINT OF REVERSE CURVE
PREFAB	PREFABRICATED
PRI	PRIMARY
PRV	PRESSURE REGULATING/REDUCING VALVE
PS	PRESSURE SWITCH, PUMP STATION
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
PT	POINT OF TANGENT,
PT	PRESSURE TRANSDUCER
PTDF	PRESSURE TREATED DOUGLAS FIR
PVC	POLYVINYL CHLORIDE
PUE	PUBLIC UTILITY EASEMENT
PVI	POINT OF VERTICAL INTERSECTION
PW	POTABLE WATER
RAD	RADIUS
RC	REINFORCED CONCRETE
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN OR ROAD
RDCR	REDUCER, REDUCING
RECIRC	RECIRCULATION
RED	REDUCING
REF	REFERENCE, REFER
REG	REGULATING, REGISTER
REINF	REINFORCE, REINFORCED
REQD	REQUIRED
REV	REVISION
RF	ROOF, RAISED FACE
RND	ROUND
RPM	REVOLUTIONS PER MINUTE
RP	RADIUS POINT
RST	REINFORCING STEEL, RESET
RT	REGULATING TANK, RADIOGRAPHIC, RIGHT
RV	ROOF VENT
R/W	RIGHT OF WAY
RW	RAW WATER
S	SOUTH, SECOND
SA	SAMPLE, SAMPLE LINE
SR	SUPPLY AIR REGISTER
SCFM	STANDARD CUBIC FEET PER MINUTE
SCH	SCHEDULE
SD	STORM DRAIN
SECT	SECTION
SHT	SHEET
SIM	SIMILAR
SLP	SLOPE
SP	SPACING, STATIC PRESSURE
SPEC	SPECIFIED, SPECIFICATION
SPECS	SPECIFICATIONS
SPG	SPACING
SPKR	SPEAKER
SPLY	SUPPLY
SPRT	SUPPORT
SQ	SQUARE
SQ FT	SQUARE FOOT
SR	SUPPLY REGISTER
SS	SANITARY SEWER, SERVICE SINK
SST	STAINLESS STEEL
STA	STATION
STD	STANDARD
STIFF	STIFFENER
STL	STEEL
STRL	STRUCTURAL
SYM	SYMBOL
SYMM	SYMMETRICAL
SYS	SYSTEM
T	THICKNESS, TOP, TOILET
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TAN	TANGENT
TBM	TEMPORARY BENCH MARK
TBC	TOP OF CATCH BASIN
TC	TOP OF CURB, TOP OF CONCRETE
TDH	TOTAL DYNAMIC HEAD
TECH	TECHNICAL
TEL	TELEPHONE
TEMP	TEMPERATURE, TEMPORARY
THK	THICK
THR'D	THREADED
TK	TANK
T.O.	TOP OF
TOG	TOP OF GRADE
TP	TELEPHONE POLE, TURNING POINT
TYP	TYPICAL
UBC	UNIFORM BUILDING CODE
UD	UNDERDRAIN
UG	UNDERGROUND
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORIES
UNO	UNLESS OTHERWISE NOTED
USBR	U.S. BUREAU OF RECLAMATION
V	VALVE, VENT, VOLT, VACUUM
VAR	VARIES, OR VARIABLE
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VOL	VOLUME
VTC	VENT THROUGH CEILING
VTR	VENT THROUGH ROOF
VSS	VOLATILE SUSPENDED SOLIDS
W	WEST, WASTE, WIDE FLANGE (BEAM)
W/	WITH
W/O	WITHOUT
WC	WATER COLUMN OR WATER CLOSET
WCO	WALL CLEANOUT
WD	WOOD
WH	WATER HEATER
WS	WATER STOP, WATER SURFACE
WSP	WELDED STEEL PIPE
WSTP	WATER STOP
WT	WEIGHT
WWM	WELDED WIRE MESH
XMTR	TRANSMITTER
XS	EXTRA STRONG
YD	YARD
YR	YEAR

BOWEN COLLINS & Associates, Inc. Consulting Engineers

PROFESSIONAL ENGINEER — STATE OF UTAH — 356700-2202 — JOEL L. ANDRUS — SCHOLASTIC

6.17.2010

REVISIONS

NO	DATE	REV BY	DESCRIPTION

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

DFCM
INTRAMURAL SOCCER FIELDS
CEDAR CITY, UTAH

DESIGN J. ANDRUS | CHECKED K. BAGLEY | APPROVED J. ANDRUS
DRAWN B. ABEL | REVIEW

GENERAL
ABBREVIATIONS

DATE JUNE 2010
PROJECT NUMBER 145-10-01

DRAWING NO. G-3
SHEET 3 OF 14

P:\500\sht\145001_G-03.dwg Jun 13,2010 - 8:29am

GENERAL NOTES:

1. EROSION AND SEDIMENTATION CONTROL: CONTRACTOR SHALL CONSTRUCT BERMS AND/OR DRAINAGE DITCHES AS NEEDED TO KEEP STORM RUNOFF FROM ENTERING EXISTING CONSTRUCTION EXCAVATIONS OR INTERFERING WITH CONSTRUCTION EFFORTS.

2. CHANGES: IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PERFORM CONSTRUCTION AS PER THE CONTRACT DOCUMENTS. ANY ADDITIONS, DELETIONS, OR CHANGES SHALL FIRST MEET WITH THE APPROVAL OF THE ENGINEER AND THE OWNER.

3. SYMBOLS: SYMBOLS, LEGENDS, AND PIPE USE IDENTIFICATIONS SHOWN SHALL BE FOLLOWED THROUGHOUT THE PLANS, WHEREVER APPLICABLE. NOT ALL OF THE VARIOUS PIPING COMPONENTS ARE NECESSARILY USED IN THE PROJECT.

4. EXISTING FACILITIES: THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING IMPROVEMENTS, WHICH ARE TO REMAIN IN PLACE, FROM DAMAGE. ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR RECONSTRUCTED TO ORIGINAL OR BETTER CONDITION TO THE SATISFACTION OF THE OWNER AT THE EXPENSE OF THE CONTRACTOR, UNLESS NOTED OTHERWISE.

5. EASEMENTS: THE CONTRACTOR SHALL BE REQUIRED TO KEEP ALL CONSTRUCTION ACTIVITIES WITHIN THE ESTABLISHED RIGHTS-OF-WAY AND EASEMENTS AS SHOWN. THIS SHALL INCLUDE BUT NOT BE LIMITED TO, VEHICLES AND EQUIPMENT, LIMITS OF TRENCH EXCAVATION, AND EXCAVATED MATERIAL AND BACKFILL STORAGE. IF THE CONTRACTOR REQUIRES ADDITIONAL CONSTRUCTION EASEMENTS, IT SHALL BE SOLELY THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN SUCH EASEMENTS FROM INDIVIDUAL PROPERTY OWNERS.

6. UTILITY LOCATIONS: EXISTING UTILITIES ARE APPROXIMATELY LOCATED. EXISTING UTILITIES ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF, AND PRESERVING, ALL UTILITIES INCLUDING THOSE NOT SHOWN OR INCORRECTLY SHOWN ON THE PLANS. CONTRACTOR SHALL NOTIFY UTILITY COMPANIES TWO (2) WEEKS IN ADVANCE OF UTILITY CONFLICTS REQUIRING RELOCATION OF MAIN LINES, AND ONE (1) WEEK IN ADVANCE OF CONFLICTS REQUIRING RELOCATION OF SERVICE LATERALS.

7. SERVICE CONNECTIONS: THE CONTRACTOR IS RESPONSIBLE FOR LOCATING SERVICE LINES FOR GAS, SEWER, WATER, IRRIGATION, POWER, STORMDRAIN AND OTHER UTILITIES, AND REPAIRING DAMAGE TO SUCH LINES AS A RESULT OF THE CONTRACTOR'S OPERATIONS. IN GENERAL, SERVICE CONNECTIONS FOR UTILITIES ARE NOT SHOWN ON THE DRAWINGS.

8. EXCAVATION SAFETY: EXCAVATION LIMITS SHOWN IN THE DETAILS ARE GRAPHICAL REPRESENTATIONS ONLY, AND DO NOT REPRESENT ACTUAL EXCAVATION LIMITS OR SAFE TRENCH CONDITIONS REQUIRED TO COMPLETE THE WORK. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONFORMANCE WITH LOCAL AND FEDERAL CODES GOVERNING SHORING AND BRACING OF EXCAVATIONS AND TRENCHES, AND FOR PROTECTION OF WORKERS.

9. THRUST RESTRAINT: CONTRACTOR SHALL PROTECT ADJACENT PRESSURE PIPELINES AND PROVIDE TEMPORARY THRUST RESTRAINT AS NECESSARY DURING CONSTRUCTION. ALL NEW PRESSURE PIPE AND FITTINGS SHALL HAVE THRUST RESTRAINED JOINTS, THRUST BLOCKS, THRUST TIES OR OTHER APPROVED RESTRAINT. THRUST PROTECTION SHALL BE ADEQUATE FOR TEST PRESSURE SPECIFIED.

10. SURVEY MONUMENTS: CONTRACTOR SHALL NOT DESTROY, REMOVE, OR DISTURB ANY EXISTING SURVEY MONUMENTS WITHOUT AUTHORIZATION OF CONTROLLING AGENCY. NO PAVEMENT CUTTING OR REMOVAL SHALL BEGIN UNTIL ALL SURVEY MARKERS OR MONUMENT POINTS THAT HAVE THE POTENTIAL OF BEING DISTURBED BY THE CONSTRUCTION OPERATIONS HAVE BEEN PROPERLY REFERENCED BY A REGISTERED LAND SURVEYOR. ALL SURVEY MONUMENTS OR POINTS DISTURBED BY THE CONTRACTOR SHALL BE ACCURATELY RESET BY A REGISTERED LAND SURVEYOR AFTER ALL RESTORATION AND RESURFACING HAS BEEN COMPLETED AT THE CONTRACTORS EXPENSE.

11. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED AS SPECIFIED.

12. CONTRACTOR SHALL BACKFILL TRENCH AREAS WHERE UTILITIES CROSS UNDER EXISTING BURIED UTILITIES WITH FLOWABLE FILL (CLSM – TYPE O MATERIAL) IN ACCORDANCE WITH SECTION 02300 IF STANDARD MECHANICAL COMPACTION EQUIPMENT CAN NOT ADEQUATELY COMPACT BACKFILL.

13. OVER HEAD POWER: CONTRACTOR SHALL COMPLY WITH SAFETY REQUIREMENTS AS REQUIRED FOR OPERATING CONSTRUCTION EQUIPMENT BENEATH HIGH VOLTAGE POWER LINES.

14. IF THE CONTRACTOR CHOOSES TO WORK ON THE PROJECT WHEN HOT MIX ASPHALT IS NOT AVAILABLE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING APPROVAL FROM THE APPROPRIATE GOVERNING AGENCY PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL FURNISH AND INSTALL TEMPORARY ASPHALT SURFACING MATERIAL WHEN PERMANENT ASPHALT BECOMES AVAILABLE, THE CONTRACTOR SHALL REMOVE THE TEMPORARY ASPHALT, FURNISH AND INSTALL THE PERMANENT ASPHALT AT NO ADDITIONAL COST TO THE OWNER.

15. CONTRACTOR SHALL ADJUST GRADE OF NEW CLEAN OUT RIMS, VALVE BOXES, INLET GRATES, AND MANHOLES TO MATCH ELEVATIONS OF PROPOSED GRADES.

16. CONTRACTOR SHALL PLUG ENDS OF ABANDONED PIPES WITH CONCRETE.

17. CONTRACTOR SHALL IMPLEMENT MEASURES DURING CONSTRUCTION THAT WILL PREVENT RUNOFF, DEBRIS AND SEDIMENT FROM ENTERING UNFINISHED PORTIONS OF THE NEW PIPE DURING CONSTRUCTION.

18. CONTRACTOR SHALL PREPARE AND SUBMIT STORMWATER POLLUTION PREVENTION PLAN TO THE GOVERNING ENTITY PRIOR TO CONSTRUCTION. CONTRACTOR SHALL ABIDE BY ALL REQUIREMENTS OF THE APPROVED PLAN.

19. CONTRACTOR MAY DISPOSE OF DEBRIS FROM THIS PROJECT AT CITY LANDFILL LOCATED AT 1000 N. LUND HIGHWAY IN CEDAR CITY. LANDFILL TIPPING FEES WILL BE WAIVED.

20. HAZARDOUS MATERIAL FROM CITY POOL HAS BEEN REMOVED PRIOR TO THIS PROJECT. CONTRACTOR WILL NOT BE RESPONSIBLE FOR ADDITIONAL PERMITTING OR WORK FOR REMOVAL AND DISPOSAL OF HAZARDOUS MATERIALS.

21. CONTRACTOR SHALL LIMIT HEAVY EQUIPMENT ACCESS TO TWO LOCATIONS. CONTRACTOR IS RESPONSIBLE TO RESTORE/REPLACE THESE LOCATIONS TO NEW CONDITION, INCLUDING CONCRETE SURFACES.

22. NO SOILS REPORT IS AVAILABLE.

23. CONTRACTOR SHALL TERMINATE ALL UTILITY CONNECTIONS TO EXISTING BUILDING IN ACCORDANCE WITH THE VARIOUS AGENCIES REQUIREMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH UTILITY TERMINATION.

24. CONTRACTOR IS RESPONSIBLE FOR ALL COSTS AND WORK TO OBTAIN ANY PERMITS REQUIRED BY GOVERNING AGENCIES.

25. ADDITIVE ALTERNATE #1 IS FOR THE LIGHTING SYSTEM. AS PART OF THIS ITEM, THE CONTRACTOR SHALL PROVIDE AND INSTALL THE LIGHTING SYSTEM AS REQUIRED IN THE DRAWINGS AND SPECIFICATIONS. BASE BID FOR THE LIGHTING INCLUDES ONLY THE INSTALLATION OF TWO 2" CONDUITS FROM EXISTING PANEL "MDP" IN THE P.E. BUILDING TO THE TWO ELECTRICAL PULL BOXES.

26. ADDITIVE ALTERNATE #2 IS FOR THE ADDITIONAL COST REQUIRED TO PROVIDE AND INSTALL SOD INSTEAD OF HYDROSEEDING THE FIELD.

BOWEN COLLINS & Associates, Inc. Consulting Engineers

PROFESSIONAL ENGINEER 383069-2202 JOEL L. ANDRUS STATE OF UTAH

6.14.2010

REVISIONS

NO	DATE	REV. BY	DESCRIPTION

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

DFCM
INTRAMURAL SOCCER FIELDS
CEDAR CITY, UTAH

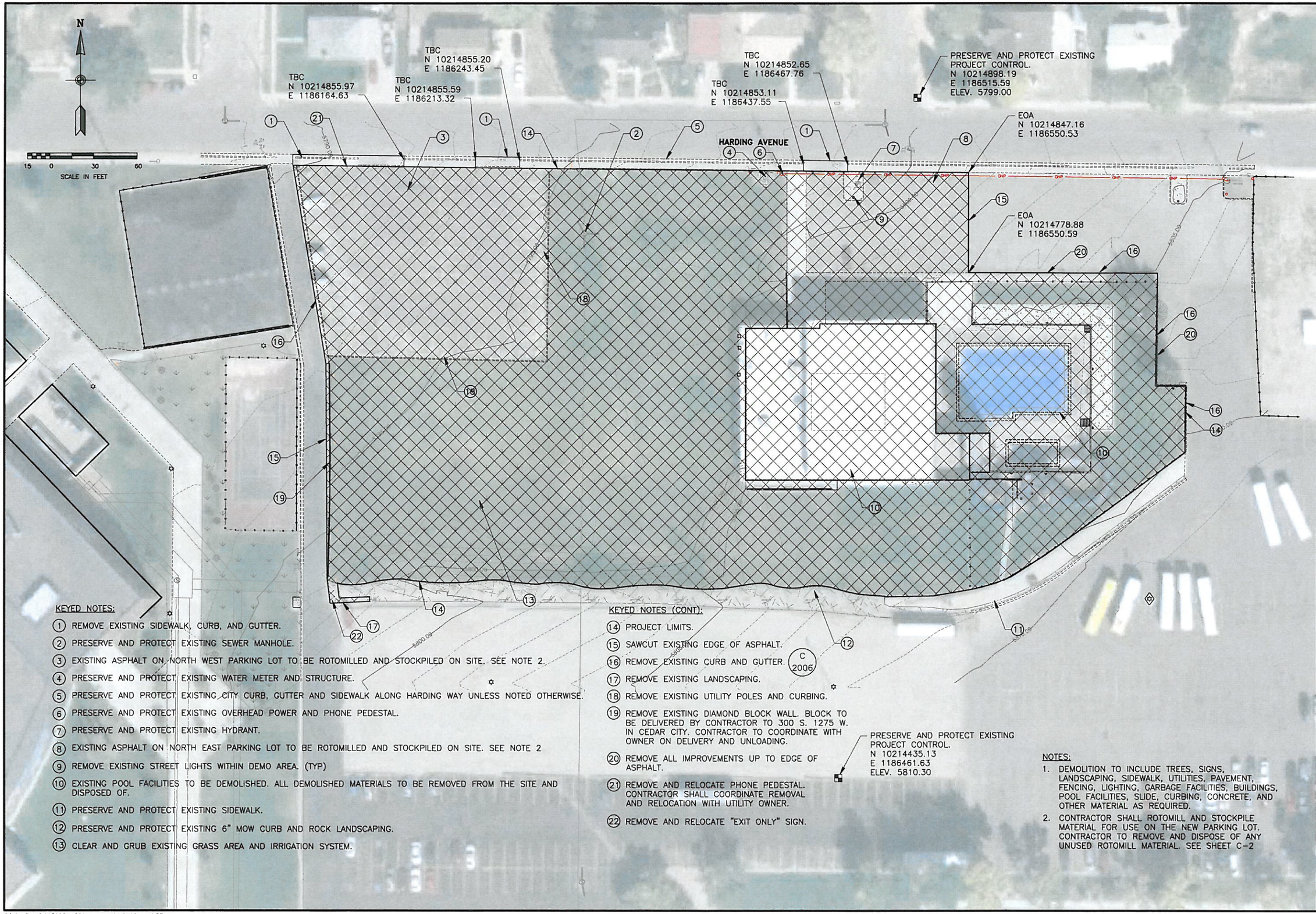
DESIGN J. ANDRUS
DRAWN B. ABEL
REVIEW K. BAGLEY
CHECKED J. ANDRUS
APPROVED

GENERAL
GENERAL NOTES

DATE JUNE 2010
PROJECT NUMBER 145-10-01

DRAWING NO. G-4
SHEET 4 OF 14

P:\SUB\cad\145\001 G-04.dwg Jun14,2010 - 5:45pm



KEYED NOTES:

1. REMOVE EXISTING SIDEWALK, CURB, AND GUTTER.
2. PRESERVE AND PROTECT EXISTING SEWER MANHOLE.
3. EXISTING ASPHALT ON NORTH WEST PARKING LOT TO BE ROTOMILLED AND STOCKPILED ON SITE. SEE NOTE 2.
4. PRESERVE AND PROTECT EXISTING WATER METER AND STRUCTURE.
5. PRESERVE AND PROTECT EXISTING CITY CURB, GUTTER AND SIDEWALK ALONG HARDING WAY UNLESS NOTED OTHERWISE.
6. PRESERVE AND PROTECT EXISTING OVERHEAD POWER AND PHONE PEDESTAL.
7. PRESERVE AND PROTECT EXISTING HYDRANT.
8. EXISTING ASPHALT ON NORTH EAST PARKING LOT TO BE ROTOMILLED AND STOCKPILED ON SITE. SEE NOTE 2
9. REMOVE EXISTING STREET LIGHTS WITHIN DEMO AREA. (TYP)
10. EXISTING POOL FACILITIES TO BE DEMOLISHED. ALL DEMOLISHED MATERIALS TO BE REMOVED FROM THE SITE AND DISPOSED OF.
11. PRESERVE AND PROTECT EXISTING SIDEWALK.
12. PRESERVE AND PROTECT EXISTING 6" MOW CURB AND ROCK LANDSCAPING.
13. CLEAR AND GRUB EXISTING GRASS AREA AND IRRIGATION SYSTEM.

KEYED NOTES (CONT):

14. PROJECT LIMITS.
15. SAWCUT EXISTING EDGE OF ASPHALT.
16. REMOVE EXISTING CURB AND GUTTER.
17. REMOVE EXISTING LANDSCAPING.
18. REMOVE EXISTING UTILITY POLES AND CURBING.
19. REMOVE EXISTING DIAMOND BLOCK WALL. BLOCK TO BE DELIVERED BY CONTRACTOR TO 300 S. 1275 W. IN CEDAR CITY. CONTRACTOR TO COORDINATE WITH OWNER ON DELIVERY AND UNLOADING.
20. REMOVE ALL IMPROVEMENTS UP TO EDGE OF ASPHALT.
21. REMOVE AND RELOCATE PHONE PEDESTAL. CONTRACTOR SHALL COORDINATE REMOVAL AND RELOCATION WITH UTILITY OWNER.
22. REMOVE AND RELOCATE "EXIT ONLY" SIGN.

C 2006

NOTES:

1. DEMOLITION TO INCLUDE TREES, SIGNS, LANDSCAPING, SIDEWALK, UTILITIES, PAVEMENT, FENCING, LIGHTING, GARBAGE FACILITIES, BUILDINGS, POOL FACILITIES, SLIDE, CURBING, CONCRETE, AND OTHER MATERIAL AS REQUIRED.
2. CONTRACTOR SHALL ROTOMILL AND STOCKPILE MATERIAL FOR USE ON THE NEW PARKING LOT. CONTRACTOR TO REMOVE AND DISPOSE OF ANY UNUSED ROTOMILL MATERIAL. SEE SHEET C-2

Bowen Collins & Associates, Inc. Consulting Engineers

PROFESSIONAL ENGINEER 5387100-2202 JOEL ANDRUS REGISTERED STATE OF UTAH 6.14.2010

REVISIONS

NO.	DATE	REV. BY	DESCRIPTION

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

DFCM
INTRAMURAL SOCCER FIELDS
CEDAR CITY, UTAH

REVIEW CHECKED K. BAGLEY APPROVED J. ANDRUS

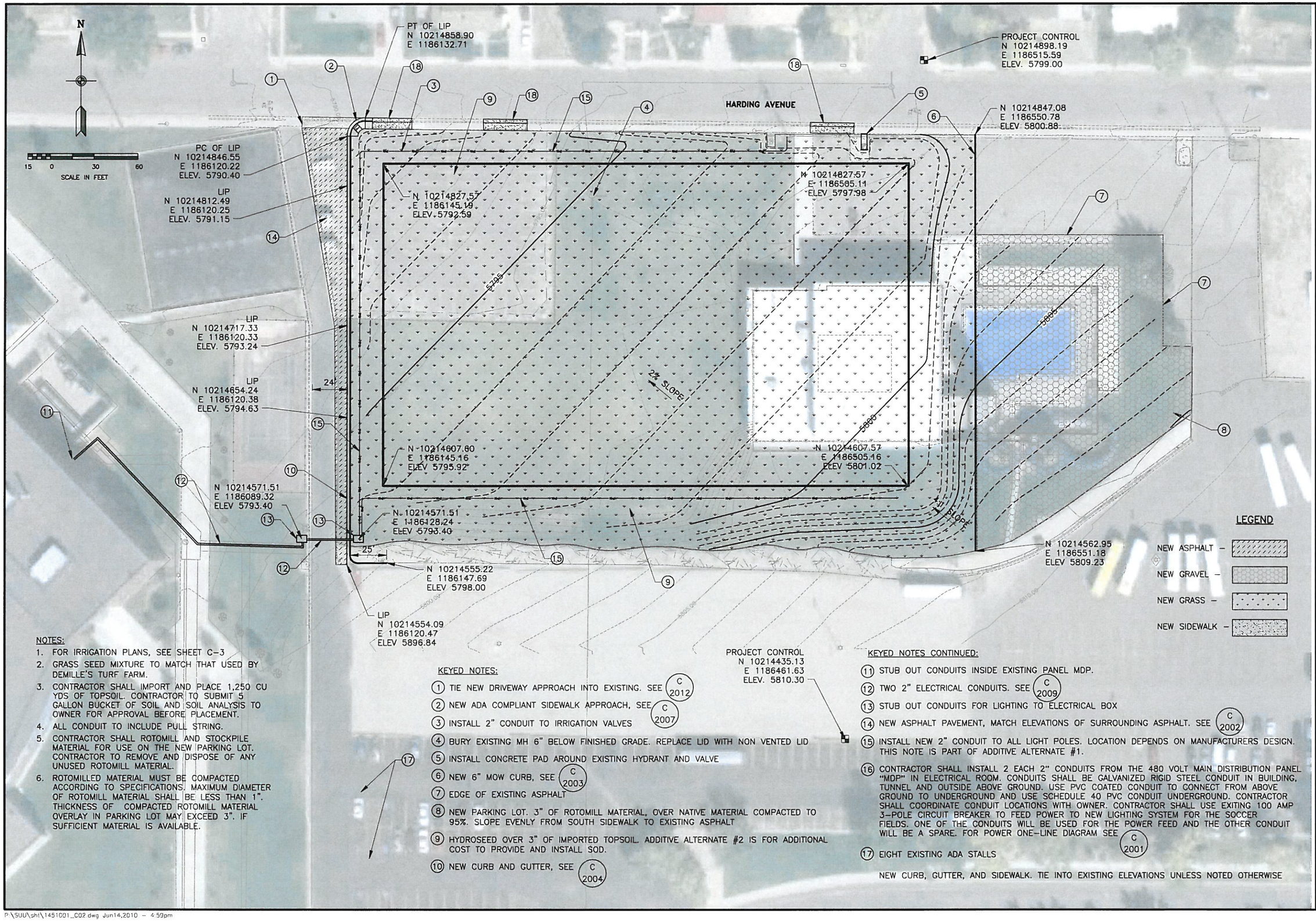
DESIGN DESIGN J. ANDRUS DRAWN B. ABEL

CIVIL
SITE DEMOLITION

DATE: JUNE 2010
PROJECT NUMBER 145-10-01

DRAWING NO. C-1
SHEET 5 OF 14

P:\SUU\sht\1451001_C01.dwg Jun14,2010 - 4:57pm



NOTES:

1. FOR IRRIGATION PLANS, SEE SHEET C-3
2. GRASS SEED MIXTURE TO MATCH THAT USED BY DEMILLE'S TURF FARM.
3. CONTRACTOR SHALL IMPORT AND PLACE 1,250 CU YDS OF TOPSOIL. CONTRACTOR TO SUBMIT 5 GALLON BUCKET OF SOIL AND SOIL ANALYSIS TO OWNER FOR APPROVAL BEFORE PLACEMENT.
4. ALL CONDUIT TO INCLUDE PULL STRING.
5. CONTRACTOR SHALL ROTOMILL AND STOCKPILE MATERIAL FOR USE ON THE NEW PARKING LOT. CONTRACTOR TO REMOVE AND DISPOSE OF ANY UNUSED ROTOMILL MATERIAL.
6. ROTOMILLED MATERIAL MUST BE COMPACTED ACCORDING TO SPECIFICATIONS. MAXIMUM DIAMETER OF ROTOMILL MATERIAL SHALL BE LESS THAN 1". THICKNESS OF COMPACTED ROTOMILL MATERIAL OVERLAY IN PARKING LOT MAY EXCEED 3". IF SUFFICIENT MATERIAL IS AVAILABLE.

KEYED NOTES:

1. TIE NEW DRIVEWAY APPROACH INTO EXISTING. SEE C 2012
2. NEW ADA COMPLIANT SIDEWALK APPROACH, SEE C 2007
3. INSTALL 2" CONDUIT TO IRRIGATION VALVES
4. BURY EXISTING MH 6" BELOW FINISHED GRADE. REPLACE LID WITH NON VENTED LID
5. INSTALL CONCRETE PAD AROUND EXISTING HYDRANT AND VALVE
6. NEW 6" MOW CURB, SEE C 2003
7. EDGE OF EXISTING ASPHALT
8. NEW PARKING LOT. 3" OF ROTOMILL MATERIAL, OVER NATIVE MATERIAL COMPACTED TO 95%. SLOPE EVENLY FROM SOUTH SIDEWALK TO EXISTING ASPHALT
9. HYDROSEED OVER 3" OF IMPORTED TOPSOIL. ADDITIVE ALTERNATE #2 IS FOR ADDITIONAL COST TO PROVIDE AND INSTALL SOD.
10. NEW CURB AND GUTTER, SEE C 2004

KEYED NOTES CONTINUED:

11. STUB OUT CONDUITS INSIDE EXISTING PANEL MDP.
12. TWO 2" ELECTRICAL CONDUITS. SEE C 2009
13. STUB OUT CONDUITS FOR LIGHTING TO ELECTRICAL BOX
14. NEW ASPHALT PAVEMENT, MATCH ELEVATIONS OF SURROUNDING ASPHALT. SEE C 2002
15. INSTALL NEW 2" CONDUIT TO ALL LIGHT POLES. LOCATION DEPENDS ON MANUFACTURERS DESIGN. THIS NOTE IS PART OF ADDITIVE ALTERNATE #1.
16. CONTRACTOR SHALL INSTALL 2 EACH 2" CONDUITS FROM THE 480 VOLT MAIN DISTRIBUTION PANEL "MDP" IN ELECTRICAL ROOM. CONDUITS SHALL BE GALVANIZED RIGID STEEL CONDUIT IN BUILDING, TUNNEL AND OUTSIDE ABOVE GROUND. USE PVC COATED CONDUIT TO CONNECT FROM ABOVE GROUND TO UNDERGROUND AND USE SCHEDULE 40 PVC CONDUIT UNDERGROUND. CONTRACTOR SHALL COORDINATE CONDUIT LOCATIONS WITH OWNER. CONTRACTOR SHALL USE EXITING 100 AMP 3-POLE CIRCUIT BREAKER TO FEED POWER TO NEW LIGHTING SYSTEM FOR THE SOCCER FIELDS. ONE OF THE CONDUITS WILL BE USED FOR THE POWER FEED AND THE OTHER CONDUIT WILL BE A SPARE. FOR POWER ONE-LINE DIAGRAM SEE C 2001
17. EIGHT EXISTING ADA STALLS

NEW CURB, GUTTER, AND SIDEWALK. TIE INTO EXISTING ELEVATIONS UNLESS NOTED OTHERWISE

BOWEN COLLINS & Associates, Inc. Consulting Engineers

PROFESSIONAL ENGINEER
6387000-2202
JOEL L. ANDRUS
STATE OF UTAH
REGISTERED
6.14.2010

NO	DATE	REV BY	DESCRIPTION
			REVISIONS

DFCM
INTRAMURAL SOCCER FIELDS
CEDAR CITY, UTAH

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

REVIEW K. BAGLEY
CHECKED J. ANDRUS
APPROVED J. ANDRUS

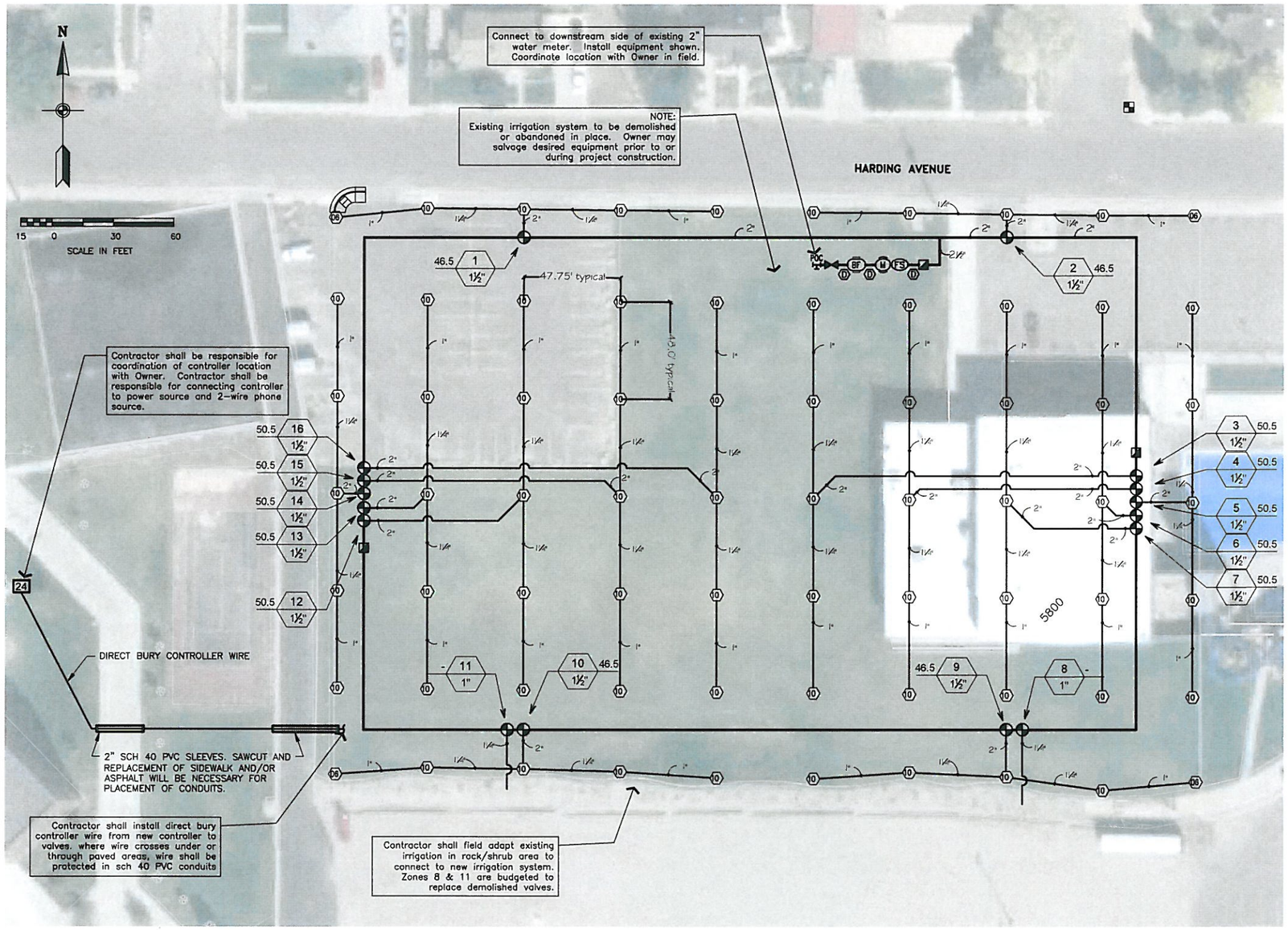
DESIGN J. ANDRUS
DESIGN B. ABEL
DRAWN

CIVIL
PROPOSED SITE IMPROVEMEMNTS

DATE JUNE 2010
PROJECT NUMBER 145-10-01

DRAWING NO. C-2
SHEET 6 OF 14

P:\SUU\sht\1451001_C02.dwg Jun14,2010 - 4:59pm



IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
06	Rain Bird 7005-SS Turf Rotor, 5" popup, adjustable and full circle, stainless steel riser	4
10	Rain Bird 7005-SS Turf Rotor, 5" popup, adjustable and full circle, stainless steel riser	67

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird PEB-PRS-D Electric Remote Control Valve with Pressure Regulator	16
	Rain Bird 44LRC 1" Quick Coupler Valve, two piece body, locking cover	3
	Matco 200RTD Ductile Iron Epoxy Coated & Resilient Wedge	1
M	Rain Bird MV 200-PEB 2" Master Valve	1
D	Drain Valve Mueller Orseal H-10288 3/4"	3
BF	Wilkins 975XL 2" RPA with strainer	1
24	Rain Bird ESP24-SAT-25 Verify model & accessories with Owner prior to ordering	1
FS	Flow Sensor Data Industrial IR-220 P 2"	1
POC	Point of Connection 2"	1
	Irrigation Lateral Line: PVC Schedule 40	3,677 l.f.
	Irrigation Mainline: PVC Schedule 40	1,324 l.f.
	Pipe Sleeve: PVC Schedule 40 Typical pipe sleeve for irrigation pipe. Pipe sleeve size shall allow for irrigation piping and their related couplings to easily slide through sleeving material. Extend sleeves 18 inches beyond edges of paving or construction.	146 l.f.

Valve Callout
- # — Valve Number
- # — Valve Flow
- #" — Valve Size

IRRIGATION NOTES

1. These Irrigation Notes are part of the irrigation Construction Documents package (hereafter referred to as CD's). Complete CD's shall include all of the following: Plan Drawings, Legend, Notes, Details and Specification Section. Contractor shall be responsible to obtain and be familiar with all components in the CD's package, all of which are necessary to correctly bid and build the irrigation system for this project.
2. Irrigation CD's are based on documents, plans or directions provided by others to the irrigation consultant.
3. The irrigation design is based on a minimum POC size, a minimum static pressure at the POC, and a minimum water volume at the POC. This design assumes a minimum of a 2" POC, @ 125 PSI, and 75 GPM. Actual site conditions may vary from these parameters. Site conditions which vary from the POC size, pressure or volume may render the installation non-operable and or may require re-design.
4. Irrigation design intent assumes a peak ET of 1.75" per week, that all of the irrigated area shall be watered in an 8 hour watering window, placing 1/2" of water per application, with a 4 day per week watering schedule.
5. Utility locations & depths, final grades, hardscape features and or plantings may not be indicated within the irrigation CD's. Irrigation Contractor shall be responsible for review of other plans, and/or site verification of these items. Irrigation Contractor shall verify location of existing features or other site improvements that will affect or be affected by irrigation system installation. If any part of the CD's cannot be followed due to existing or proposed conditions contact the Owner Approved Representative (OAR) for instructions prior to commencing or proceeding with that work.
6. Contractor shall self-verify material counts and square footages. Any quantities shown in Irrigation Legend are provided as courtesy Owner information only. Shown plan quantities shall take precedence over any listed legend quantities. Contractor shall be responsible to provide the larger quantity indicated.
7. Contractor shall contact the local underground utility provider or locator services for utility location and identification 48 hours prior to any excavation on project site.
8. Perform excavation in the vicinity of underground utilities and existing buildings, features or hardscapes with care; and if necessary, by hand. Contractor bears full responsibility for this work and disruption or damage shall be repaired immediately at no expense to the Owner.
9. Exact locations of major irrigation components and routing of main line and wiring to be approved by the OAR in the field prior to installation. Irrigation main line and/or other components are shown schematically on plan for graphic clarity only. All Irrigation components shall be located in landscaped areas.
10. Irrigation plans may show Isolation Valves and or Remote Control Valves (RCV's) in groups and locations. Contractor shall place RCV's in logical groupings and locations as field conditions permit. All remote control valves and quick coupler valves shall be isolated from the main line via a manifold isolation valve as shown in details.
11. Quick coupler valves in landscaped areas shall be installed as close as possible to plan locations. Irrigation Contractor may locate quick coupler valves at his discretion. POC quick coupler may not be moved.
12. Contractor shall be responsible to ensure all sleeves necessary for main line, wire and lateral line are installed as needed, prior to hardscape features. Not all sleeving necessary to complete this project may be shown on plan. Portions of irrigation sleeves may have or may not have been previously installed by others. Coordinate location, installation and usage with General Contractor and or OAR.
13. Contractor shall note that same nozzle is used for full circle and part circle heads. Full circle head zones shall have twice as much time per zone on controller.

Bowen Collins & Associates, Inc. Consulting Engineers

PROFESSIONAL ENGINEER 5387008-2202 JOEL ANDRUS REGISTERED STATE OF UTAH 6.14.2010

NO.	DATE	REV. BY	DESCRIPTION
			REVISIONS

DFCM
INTRAMURAL SOCCER FIELDS
CEDAR CITY, UTAH

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

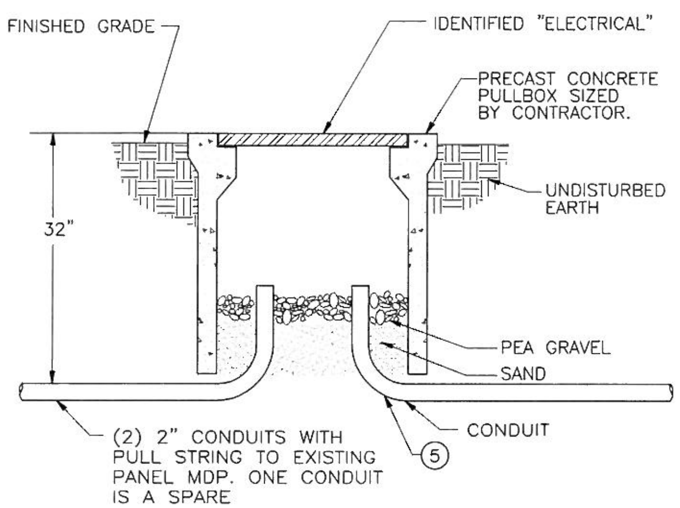
DESIGN J. ANDRUS
DRAWN B. ABEL
REVIEW
CHECKED K. BAGLEY
APPROVED J. ANDRUS

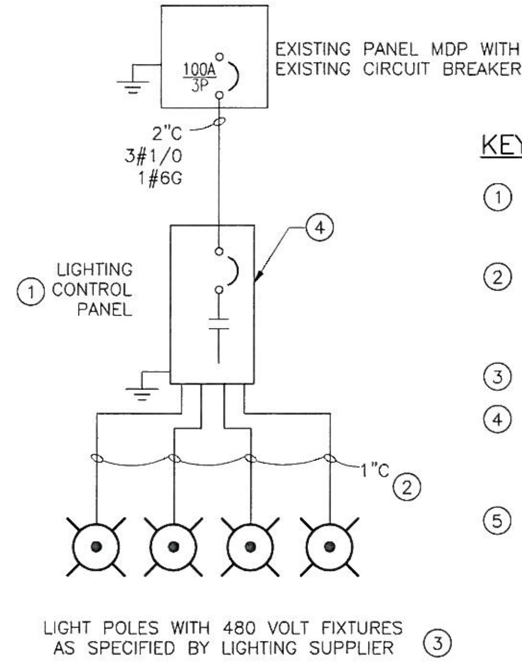
CIVIL
IRRIGATION PLAN

DATE: JUNE 2010
PROJECT NUMBER 145-10-01

DRAWING NO. C-3
SHEET 7 OF 14

P:\SUU\sht\1451001_C03.dwg Jun13,2010 - 8:43pm



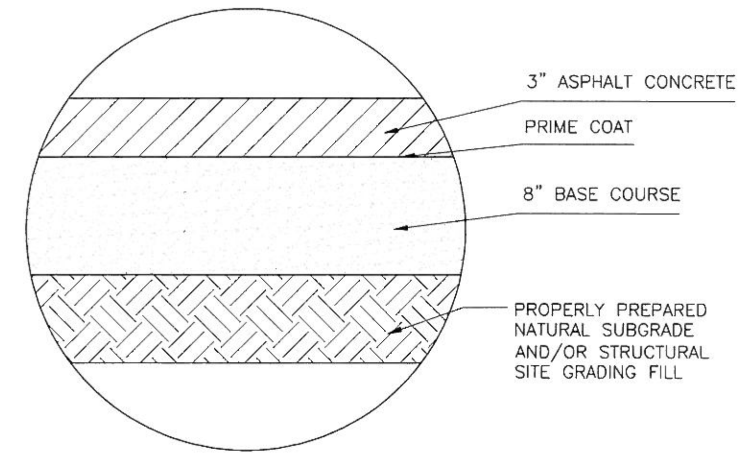


KEY NOTES:

1. LIGHTING CONTROL PANEL SHALL BE PROVIDED BY LIGHTING SUPPLIER IN ACCORDANCE WITH LIGHTING SPECIFICATION.
2. CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE FOR AMPERAGE AND VOLTAGE DROP. SIZING SHALL BE REVIEWED BY ENGINEER BEFORE INSTALLATION.
3. THE QUANTITY OF POLES AND THE NUMBER OF LIGHTS ON EACH POLE WILL VARY BY LIGHTING MANUFACTURER.
4. CONTRACTOR SHALL PROVIDE AND INSTALL A ONE (1) KVA SINGLE PHASE 480 V PRIMARY TO 120 V SECONDARY TRANSFORMER FOR LIGHTING CONTROLS. TRANSFORMER SHALL BE IN A NEMA-4 ENCLOSURE.
5. ALL CONDUIT AND PULL STRING FROM EXISTING PANEL MDP TO ELECTRICAL PULL BOX IN THE FIELD SHALL BE INSTALLED AS PART OF BASE BID. ADDITIONAL WORK AND MATERIAL REQUIRED TO CONNECT TO EXISTING PANEL AND INSTALL LIGHTING SYSTEM AS SPECIFIED SHALL BE INCLUDED IN ADDITIVE ALTERNATE #1.

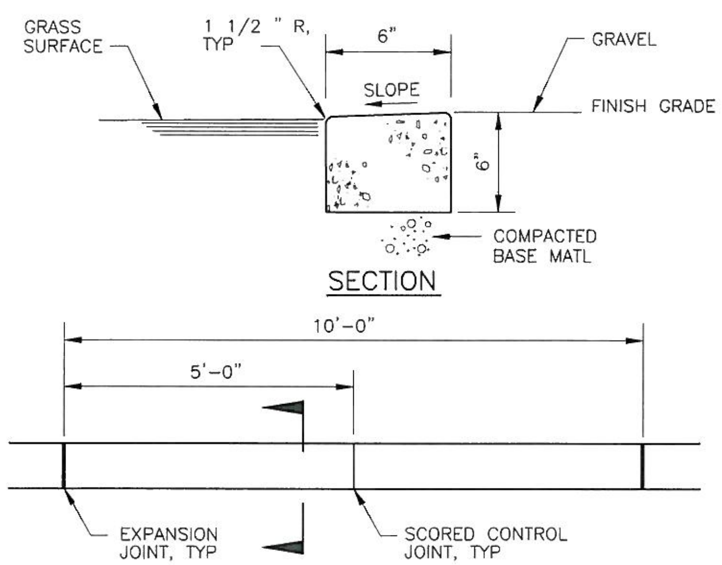
TYPICAL PULL BOX DETAIL AND ONE LINE DIAGRAM (C 2001)

NTS



ASPHALT PAVEMENT (C 2002)

NTS

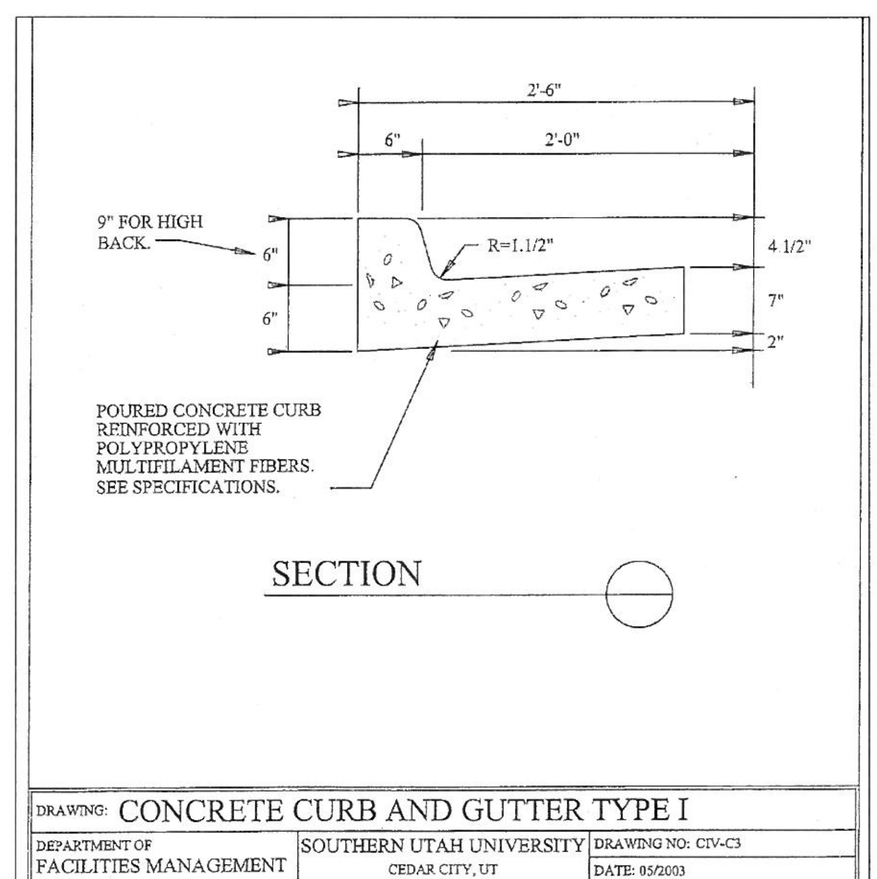


NOTES:

1. EXPANSION JOINTS OF 1/2" PREMOLDED JOINT FILLER SHALL BE PLACED 1/4" BELOW FINISHED SURFACE OF CONCRETE.
2. DEPTH OF CONTROL JOINTS SHALL BE APPROXIMATELY ONE QUARTER OF CONCRETE SLAB THICKNESS, BUT NOT LESS THAN 1".
3. ALL EXPOSED SURFACES OF CURB SHALL BE GIVEN A MORTAR BRUSH COAT CONSISTING OF ONE PART PORTLAND CEMENT, ONE PART SAND AND THEN TROWELED SMOOTH.

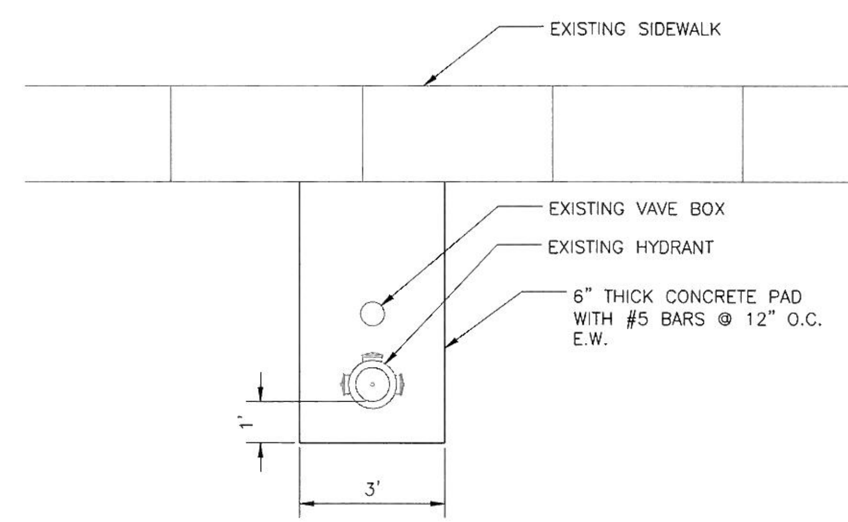
CONCRETE MOW STRIP (C 2003)

NTS



CONCRETE CURB AND GUTTER (C 2004)

NTS



NOTE:

WRAP EXISTING HYDRANT AND VALVE BOX WITH EXPANSION JOINT MATERIAL PRIOR TO POURING CONCRETE

CONCRETE PAD AROUND FIRE HYDRANT (C 2005)

NTS

BOWEN COLLINS & Associates, Inc. Consulting Engineers

PROFESSIONAL ENGINEER No. 5387000-2202 JOEL L. ANDRUS STATE OF UTAH REGISTERED
6.14.2010

NO.	DATE	REV. BY	DESCRIPTION

REVISIONS

VERIFY SCALE — BAR IS ONE INCH ON ORIGINAL DRAWING

DFCM
INTRAMURAL SOCCER FIELDS
CEDAR CITY, UTAH

REVIEW: CHECKED K. BAGLEY; APPROVED J. ANDRUS

DESIGN: DESIGN J. ANDRUS; DRAWN B. ABEL

CIVIL
DETAILS-1

PROJECT NUMBER 145-10-01

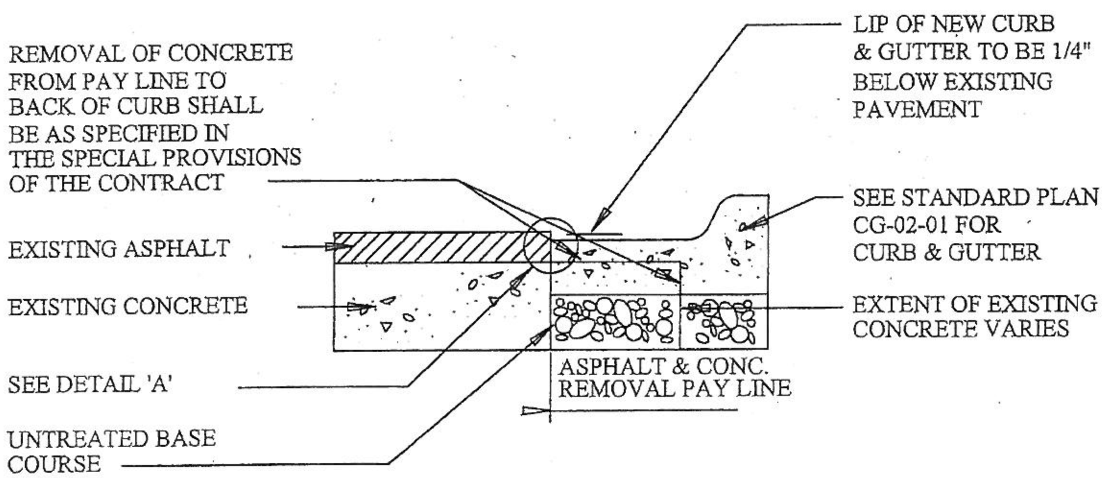
DATE: JUNE 2010

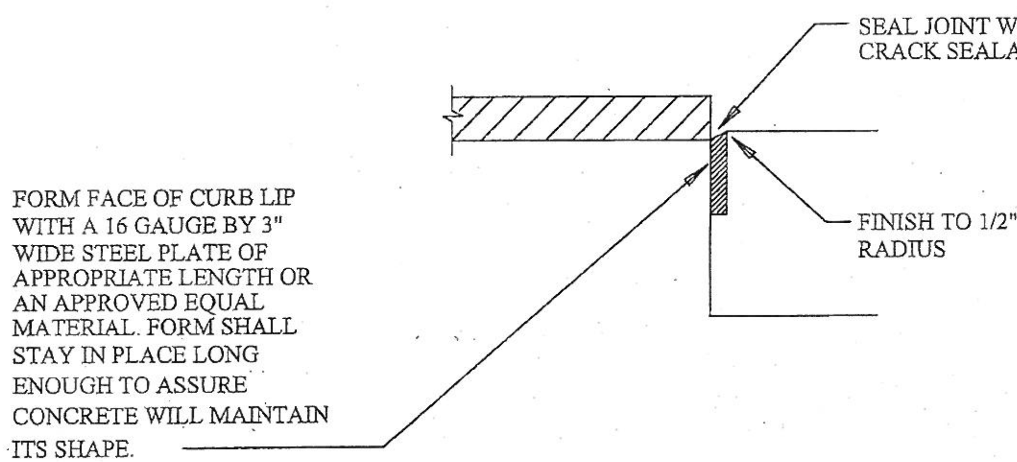
DRAWING NO. D-1

SHEET 8 OF 14

P:\SUU\sht\1451001_D01.dwg Jun13,2010 - 8:58pm

TYPICAL CURB & GUTTER REMOVAL & INSTALLATION WITHOUT PAVEMENT TIE-IN

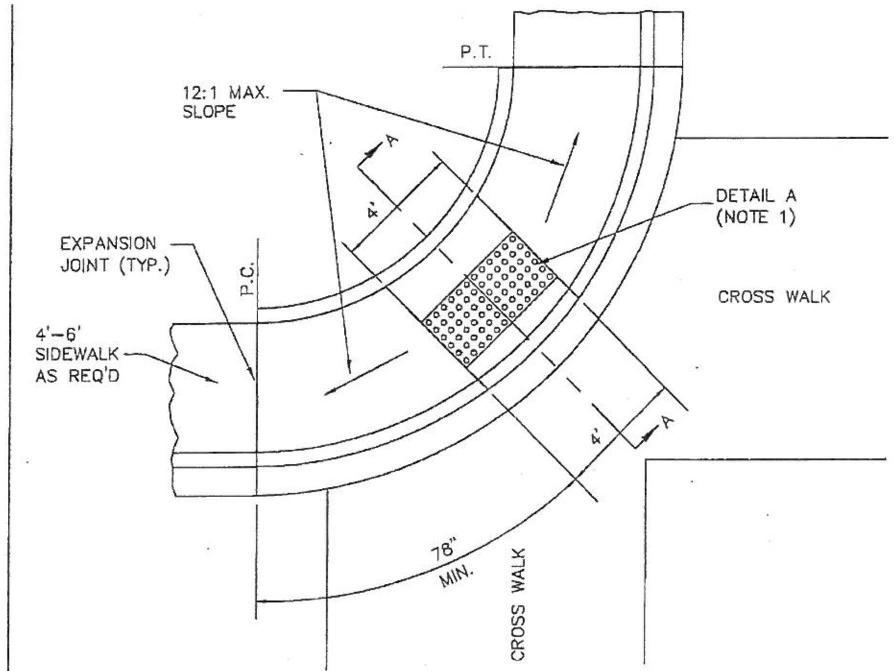




DETAIL 'A'

DRAWING: CURB & GUTTER REMOVAL & INSTALLATION		
DEPARTMENT OF FACILITIES MANAGEMENT	SOUTHERN UTAH UNIVERSITY CEDAR CITY, UT	DRAWING NO: CIV-MSC-8
		DATE: 05/2003

CURB AND GUTTER
NTS
C 2006



PLAN
N.T.S.

NOTES:

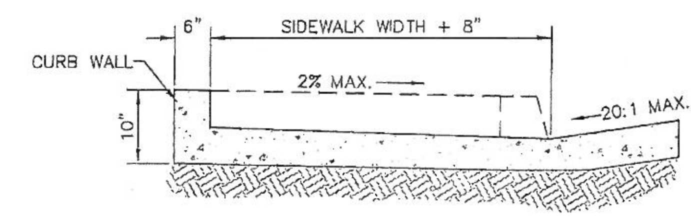
1– DETECTABLE WARNING CAST–IN–PLACE SYSTEM WITH TRUNCATED DOMES BY AMOR–TILE O.A.E. 24" x 48" SIZE, BACK RED COLOR O.A.E.

2– WHEELCHAIR RAMPS SHALL BE LOCATED AT THE MIDPOINT OF CURB RADIUS UNLESS OTHERWISE INDICATED ON PLAN.

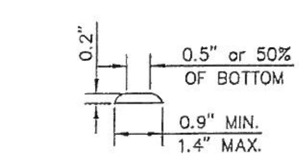
3– RAMPS SHALL BE CONSTRUCTED WITH A ROUGH BROOM FINISH TRANSVERSE TO THE SLOPE.

4– ALL CONCRETE TO BE CLASS A.

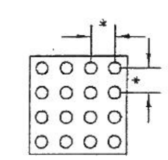
5– BACK OF WALK AND CURB WALL TO BE 1 INCH ABOVE TOP BACK OF CURB AT P.C. AND P.T.



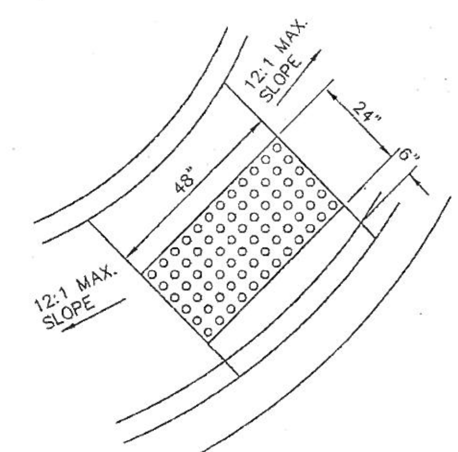
SECTION A–A
N.T.S.



RAISED TRUNCATED DOMES



* SPACING
1.6" MIN.
2.4" MAX.



DETAIL A
N.T.S.

SHEET NO. C5 FILE: C05	ACCESSIBLE RAMP	CEDAR CITY P.O. BOX 249 10 NORTH MAIN STREET CEDAR CITY, UTAH 84721 PH. (435) 586-2963	SCALE: N.T.S.	DATE: 08/2008
			DRAWN: T.B.M.	CHECKED: J.C.N.

ADA SIDEWALK RAMP
NTS
C 2007

BOWEN COLLINS & Associates, Inc. Consulting Engineers

REGISTERED PROFESSIONAL ENGINEER No. 5387000-2202 JOEL L. ANDRUS STATE OF UTAH
6.14.2010

NO.	DATE	REV. BY	DESCRIPTION

REVISIONS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

DFCM
INTRAMURAL SOCCER FIELDS
CEDAR CITY, UTAH

DESIGN: DESIGN J. ANDRUS; DRAWN B. ABEL
REVIEW: CHECKED K. BAGLEY; APPROVED J. ANDRUS

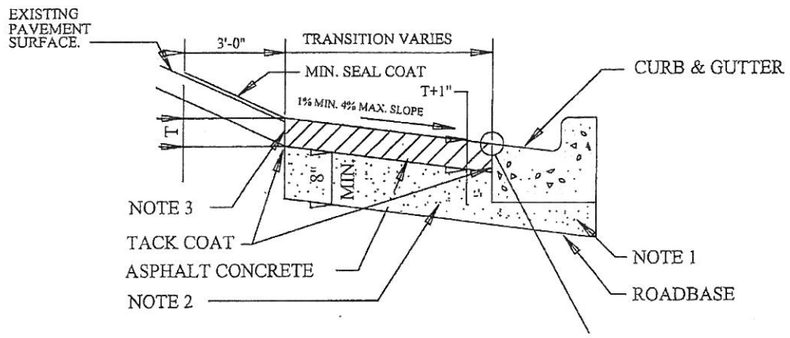
CIVIL
DETAILS–2

PROJECT NUMBER 145–10–01
DATE: JUNE 2010

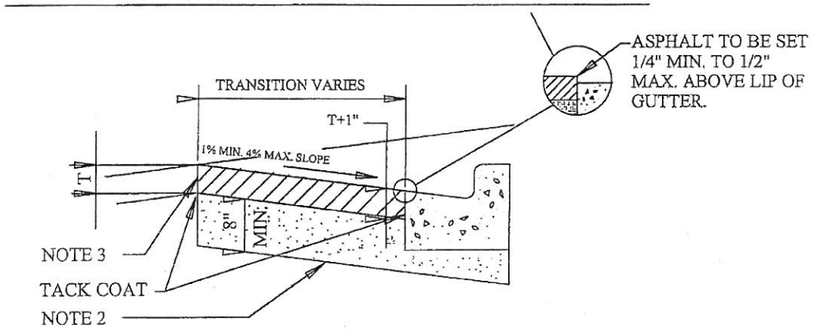
DRAWING NO. D–2
SHEET 9 OF 14

P:\SUU\sht\1451001_D02.dwg Jun14,2010 – 4:03pm

TYPICAL ASPHALT PAVEMENT TIE-IN



CASE 1 - POSITIVE STREET TIE-IN



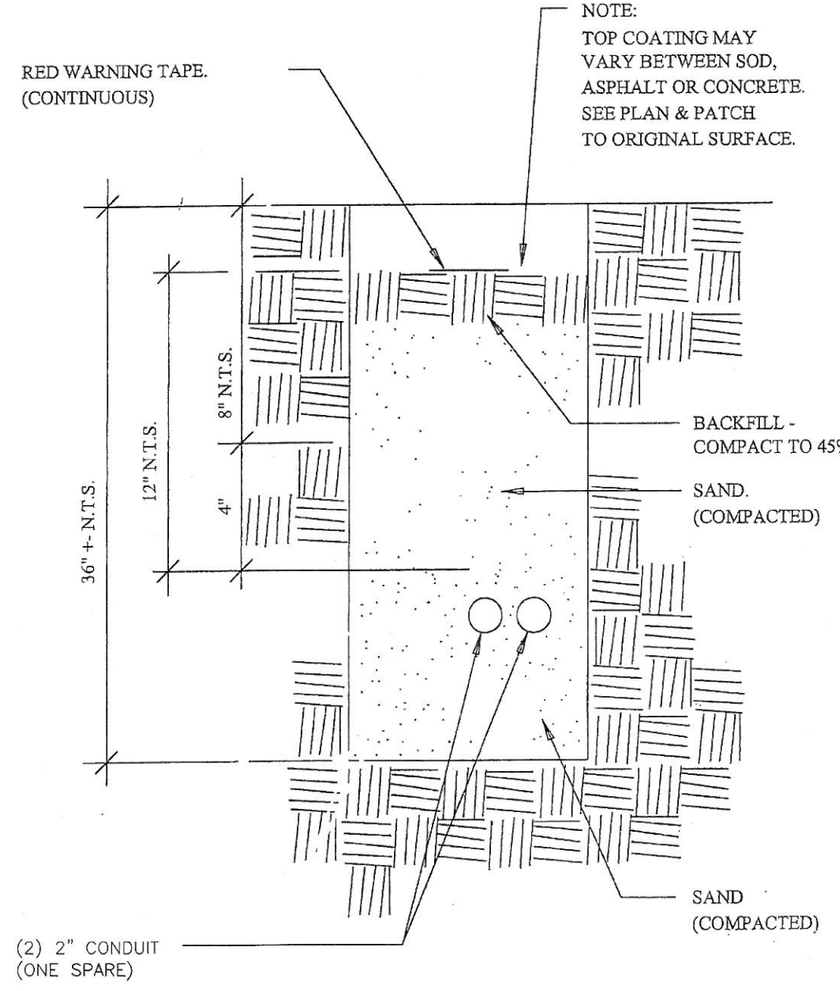
CASE 2 - NEGATIVE STREET TIE-IN

NOTES:

1. MATCH EXISTING ROAD BASE OR 8" OF UNTREATED BASE COURSE MATERIAL MINIMUM.
2. USE UNTREATED BASE COURSE MATERIAL, EXCEPT WHERE SAND OR GRAVEL ALREADY EXISTS. COMPACT TO 96% AVERAGE WITH NOTHING LESS 92% OF MAXIMUM DRY DENSITY (A.S.T.M. D-1557, METHOD D)
3. PROVIDE A NEAT STRAIGHT JOINT BETWEEN EXISTING & NEW ASPHALT SURFACES. SAWCUT JOINT IF EXISTING PAVEMENT EXCEEDS 3" IN THICKNESS, OR IF CONCRETE UNDERLIES ASPHALT PAVMENT.

DRAWING: TYPICAL ASPHALT PAVEMENT TIE-IN		
DEPARTMENT OF FACILITIES MANAGEMENT	SOUTHERN UTAH UNIVERSITY CEDAR CITY, UT	DRAWING NO: CIV-MSC-7
		DATE: 05/2003

TYPICAL ASPHALT TIE-IN (C 2008)
NTS



NOTE:
PULL STRING SHALL BE INSTALLED IN ALL CONDUITS

DRAWING: TYPICAL TRENCH DETAIL		
DEPARTMENT OF FACILITIES MANAGEMENT	SOUTHERN UTAH UNIVERSITY CEDAR CITY, UT	DRAWING NO: ELEC-42
		DATE: 05/2003

TYPICAL TRENCH DETAIL (C 2009)
NTS

BOWEN COLLINS & Associates, Inc. Consulting Engineers

REGISTERED ENGINEER 5387002-2202 JOEL ANDRUS STATE OF UTAH

NO.	DATE	REV BY	DESCRIPTION
			REVISIONS

DFCM
INTRAMURAL SOCCER FIELDS
CEDAR CITY, UTAH

DESIGN J. ANDRUS
DRAWN B. ABEL
REVIEW
CHECKED K. BAGLEY
APPROVED J. ANDRUS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

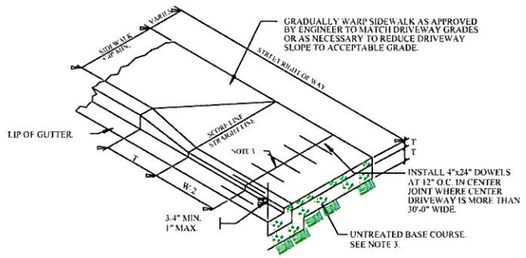
CIVIL
DETAILS-3

PROJECT NUMBER 145-10-01
DATE: JUNE 2010

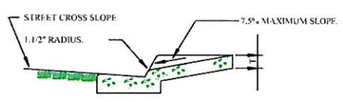
DRAWING NO. D-3
SHEET 10 OF 14

P:\SUU\sht\1451001_D03.dwg Jun13,2010 - 9:01pm

DIP DRIVEWAY APPROACH



PLAN



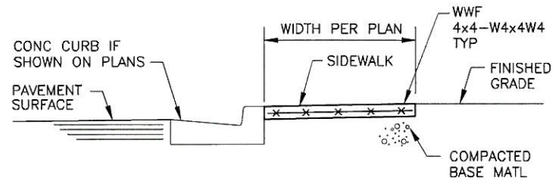
SECTION

NOTES:

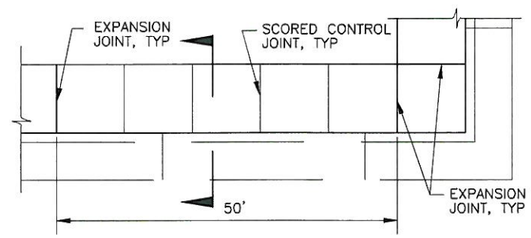
1. USE CLASS 40 TYPE III HIGH EARLY STRENGTH CONCRETE WITH FIBERMESH REINFORCING. SEE SPECIFICATIONS.
2. EDGE CONCRETE WITH 1/2" RADIUS EDGING TOOL.
3. PLACE 1/2" EXPANSION JOINT IN THE DRIVEWAY CENTERLINE IF "W" IS GREATER THAN 20' FILLER STRIP SHALL BE FULL DEPTH OF CONCRETE PLUS 1" WITH TOP SET FLUSH WITH TOP OF CONCRETE.
4. USE UNTREATED BASE COURSE MATERIAL EXCEPT WHERE ACCEPTABLE SAND OR GRAVEL ALREADY EXISTS. COMPACT TO 96% AVERAGE WITH NOTHING LESS THAN 92% OF THE MAXIMUM DRY DENSITY (ASTM D-698)
5. DIFFERENCE IN SLOPE OF DRIVEWAY RAMP AND THE SLOPE OF A LINE BETWEEN THE GUTTER AND A POINT ON THE ROADWAY 5'-0" FROM THE FRONT EDGE OF THE GUTTER SHALL NOT EXCEED 15%. REDUCE DRIVEWAY RAMP SLOPE, NOT GUTTER SLOPE, WHERE REQUIRED. BREAKOVER ANGLE AT BACK OF APPROACH SHALL NOT EXCEED 6% MAX.
6. CONCRETE SHALL BE MONOLITHIC CLASS 40 IN ACCORDANCE STANDARD SPECIFICATION 03000.

DRAWING: DIP DRIVEWAY APPROACH		
DEPARTMENT OF FACILITIES MANAGEMENT	SOUTHERN UTAH UNIVERSITY CEDAR CITY, UT	DRAWING NO: CIV-C7
		DATE: 05/2003

DIP DRIVEWAY APPROACH C 2010
NTS



SECTION



PLAN

NOTES:

1. USE MONOLITHIC CONSTRUCTION 4" THICK EXCEPT AT DRIVEWAYS WHERE THICKNESS SHALL BE 6" OR AS SHOWN ON PLANS.
2. EXPANSION JOINTS OF 1/2" PREMOLDED JOINT FILLER SHALL BE PLACED AT BACK OF CURB AND AT INTERSECTIONS WITH PERPENDICULAR SIDEWALKS OR DRIVEWAYS.
3. PLACE CONTROL JOINTS AT INTERVALS EQUAL TO 1 TO 1 1/2 TIMES THE WIDTH OF THE SIDEWALK UNIFORMLY PLACED ALONG LENGTH OF SIDEWALK. DEPTH OF JOINT SHALL BE 1" MINIMUM.
4. EDGE SIDEWALK WITH 1/2" RADIUS EDGING TOOL ROUND EDGES AT EXPANSION JOINTS TO A RADIUS OF 1/2".

CONCRETE SIDEWALK C 2011
NTS

BOWEN COLLINS & Associates, Inc. Consulting Engineers

PROFESSIONAL ENGINEER STATE OF UTAH 5387002-2202 JOEL L ANDRUS REGISTERED

NO.	DATE	REV. BY	DESCRIPTION
			REVISIONS

DFCM
INTRAMURAL SOCCER FIELDS
CEDAR CITY, UTAH

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

DESIGN J. ANDRUS | DRAWN B. ABEL | REVIEW K. BAGLEY | CHECKED J. ANDRUS | APPROVED

CIVIL
DETAILS–4

DATE: JUNE 2010
PROJECT NUMBER 145-10-01

DRAWING NO. D–4
SHEET 11 OF 14

P:\SUU\sht\1451001_D04.dwg Jun14,2010 - 4:05pm

NOTES:

1. Prepare a hole for foundation and concuit.
2. See FIGURE 1. Position sweep ell conduit sections in hole as shown. Cover conduit ends with tape to seal out dirt and debris. Backfill soil to about 12 inches below finished grade lever.
3. Use 5/16 x 4-1/2" mounting bolts and 5/16-18 hex nuts supplied, prepare plastic mounting template as shown in FIGURE 2. Threaded end bolts should protrude 1-1/8" to 1-1/4" from top surface of template.
4. Pour concrete into hole and smooth with trowel.
5. Press mounting template into concrete until flush. Center template with conduit as shown to prevent pedestal\conduit interference. see FIGURE 3.
6. To prevent pooling at base of pedestal, finish foundation with gradual slope away from mounting template.

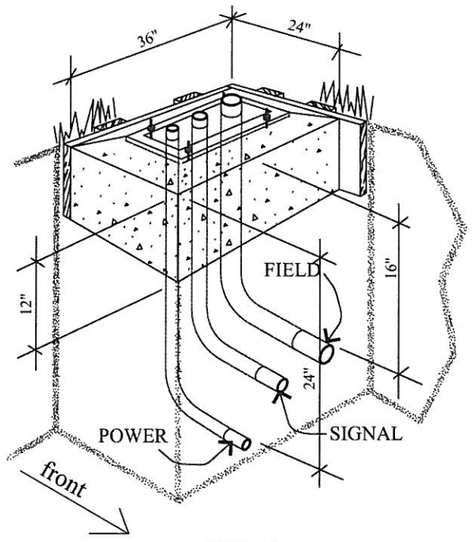


FIGURE 1

OVERVIEW OF COMPLETED FOUNDATION

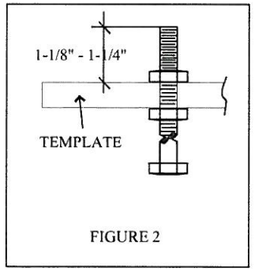


FIGURE 2

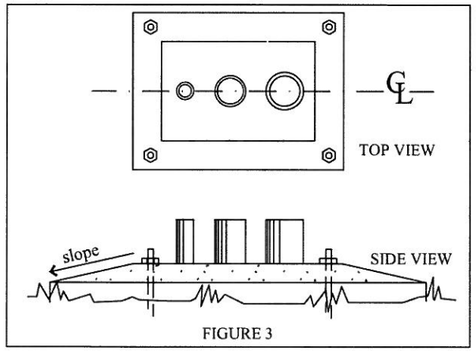


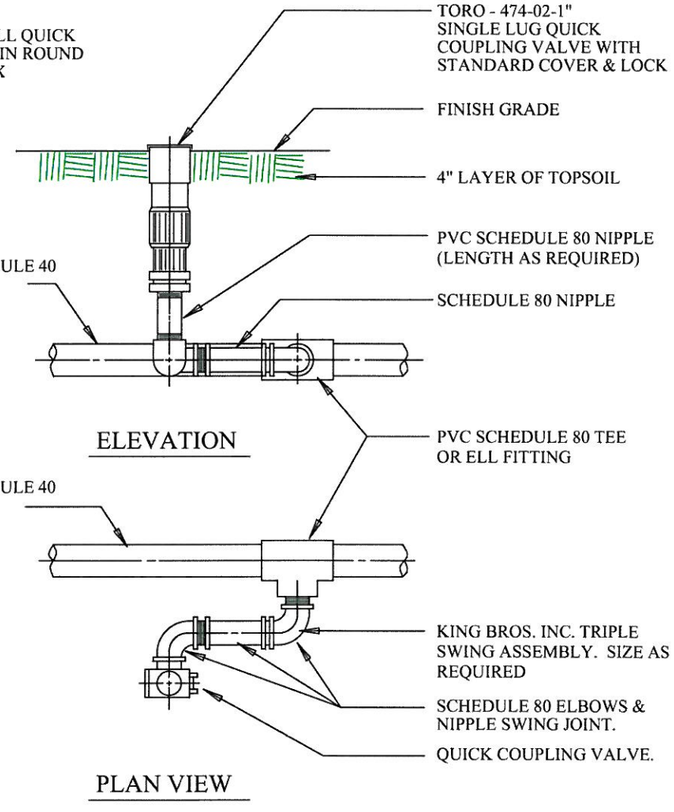
FIGURE 3

PEDESTAL INSTALLATION FOR TORO TC CONTROLLER

DRAWING: AUTOMATIC CLOCK INSTALLATION

DEPARTMENT OF FACILITIES MANAGEMENT	SOUTHERN UTAH UNIVERSITY CEDAR CITY, UT	DRAWING NO: LS-4
		DATE: 05/2003

NOTE:
INSTALL ALL QUICK COUPLERS IN ROUND VALVE BOX



ELEVATION

PLAN VIEW

DRAWING: FLEXIBLE SWING JOINT RISER Q.C.

DEPARTMENT OF FACILITIES MANAGEMENT	SOUTHERN UTAH UNIVERSITY CEDAR CITY, UT	DRAWING NO: LS-5
		DATE: 05/2003

BOWEN COLLINS & Associates, Inc. Consulting Engineers

STATE OF UTAH REGISTERED ENGINEER 338000-2202 JOEL L. ANDRUS

NO	DATE	REV. BY	DESCRIPTION
			REVISIONS

DFCM
INTRAMURAL SOCCER FIELDS
CEDAR CITY, UTAH

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

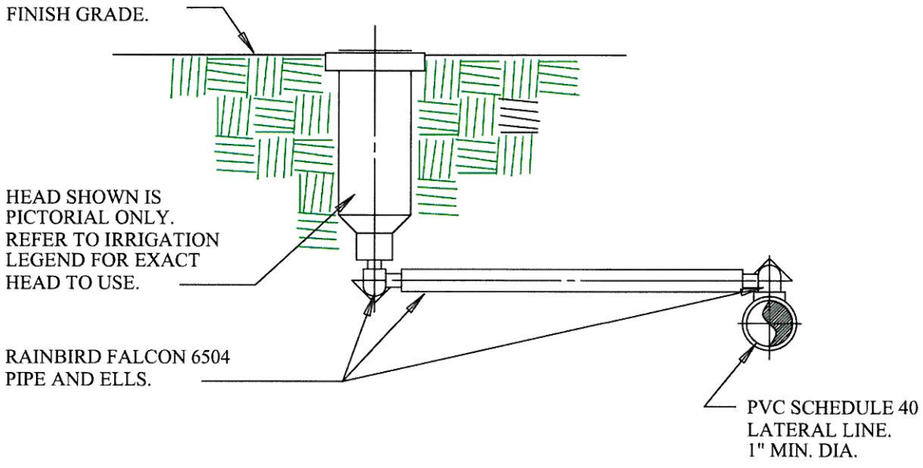
DESIGN J. ANDRUS
DRAWN B. ABEL
CHECKED K. BAGLEY
APPROVED J. ANDRUS
REVIEW

CIVIL
DETAILS–5

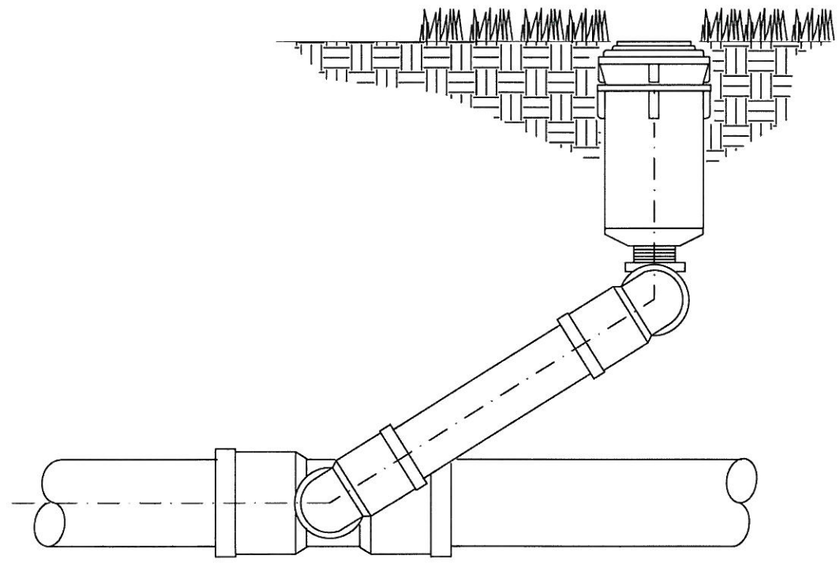
PROJECT NUMBER 145–10–01
DATE: JUNE 2010

DRAWING NO. D–5
SHEET 12 OF 14

P:\SUU\sht\1451001_D05.dwg Jun14,2010 - 4:05pm



DRAWING: SWING JOINT DETAIL ALL TORO HEADS		
DEPARTMENT OF FACILITIES MANAGEMENT	SOUTHERN UTAH UNIVERSITY CEDAR CITY, UT	DRAWING NO: LS-8
		DATE: 05/2003



TYPICAL HEAD INSTALLATION
FOR 7 GPM OR MORE

DRAWING: TYP. HEAD INSTALLATION FOR 7 GPM OR MORE		
DEPARTMENT OF FACILITIES MANAGEMENT	SOUTHERN UTAH UNIVERSITY CEDAR CITY, UT	DRAWING NO: LS-9
		DATE: 05/2003

BOWEN COLLINS & Associates, Inc. Consulting Engineers

PROFESSIONAL ENGINEER JOEL L. ANDRUS 5397000-2202 STATE OF UTAH
6.14.2010

NO	DATE	REV BY	DESCRIPTION
			REVISIONS

DFCM
INTRAMURAL SOCCER FIELDS
CEDAR CITY, UTAH

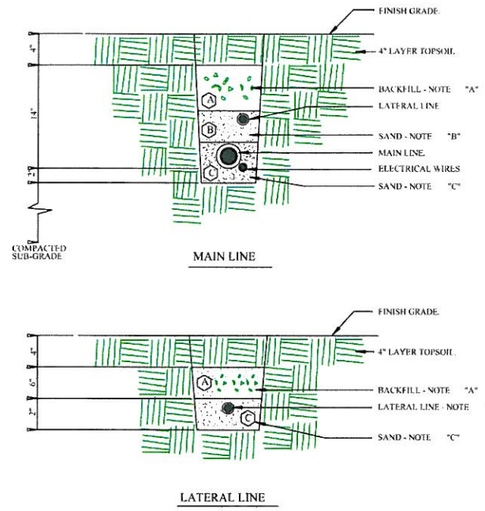
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

DESIGN J. ANDRUS
REVIEW K. BAGLEY
DESIGN J. ANDRUS CHECKED K. BAGLEY
DRAWN B. ABEL APPROVED J. ANDRUS

CIVIL
DETAILS-6
DATE JUNE 2010
PROJECT NUMBER 145-10-01

DRAWING NO. D-6
SHEET 13 OF 14

P:\SUU\sht\1451001_D06.dwg Jun14,2010 - 4:02pm



MAIN LINE

LATERAL LINE

NOTES:

(A) USE EXCAVATED TRENCH MATERIAL NOT TO EXCEED 2" DIAMETER ROCKS.

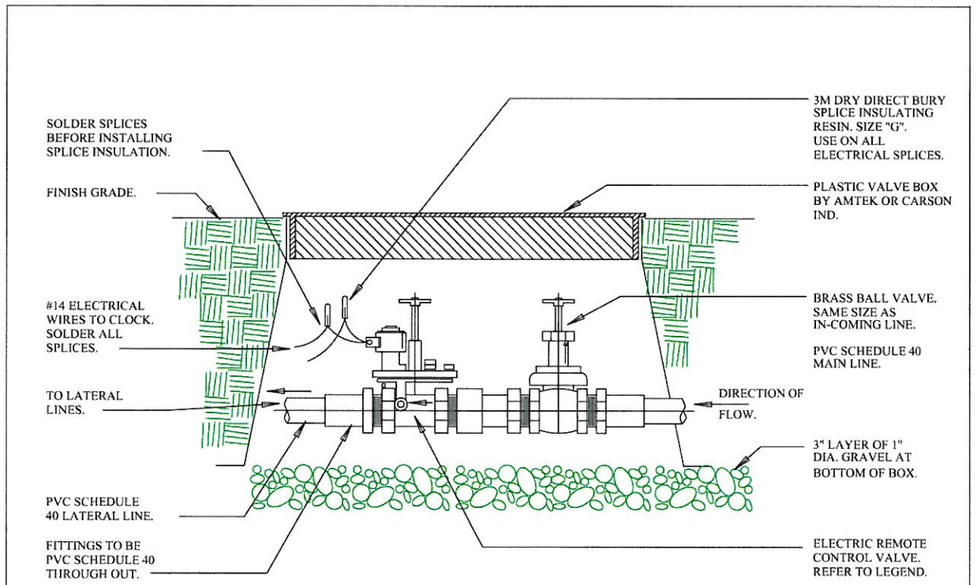
(B) IN CASES WHERE LATERAL LINE IS INSTALLED IN MAIN LINE TRENCH, USE SAND TO BACKFILL TRENCH SO THAT LATERAL LINE IS 12" BELOW FINISH GRADE.

(C) USE SAND TO A DEPTH OF 2" TO BED ALL PVC PIPES AND ELECTRICAL WIRES

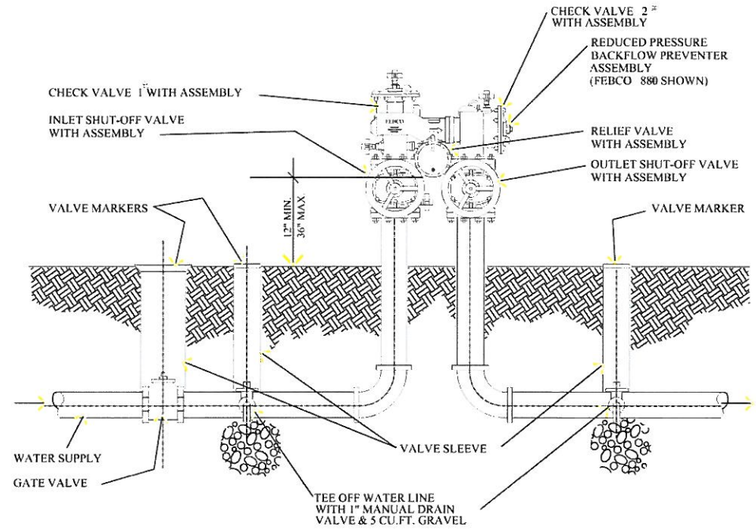
GENERAL NOTE:

LOCATE ALL TRENCHES 12" AWAY FROM ALL BUILDINGS, SIDEWALKS OR ANY HARD SURFACES. SETTLE ALL TRENCHES WITH WATER PRIOR TO INSTALLTION OF TOPSOIL

DRAWING: TRENCH DETAIL		
DEPARTMENT OF FACILITIES MANAGEMENT	SOUTHERN UTAH UNIVERSITY CEDAR CITY, UT	DRAWING NO: LS-6
		DATE: 05/2003

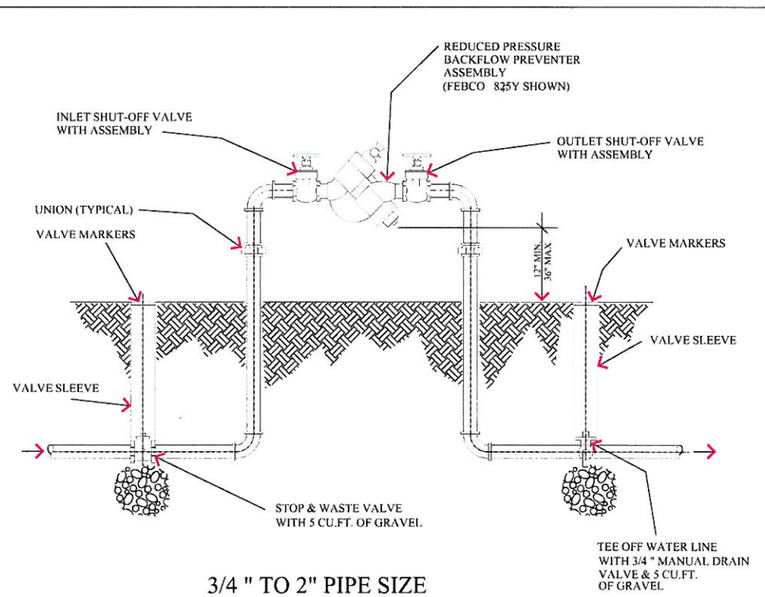


DRAWING: CONNECTION FOR IRRIGATION SYSTEM		
DEPARTMENT OF FACILITIES MANAGEMENT	SOUTHERN UTAH UNIVERSITY CEDAR CITY, UT	DRAWING NO: LS-7
		DATE: 05/2003



2 1/2 " TO 10" PIPE SIZE

DRAWING: REDUCED PRESSURE BACKFLOW PREVENTER		
DEPARTMENT OF FACILITIES MANAGEMENT	SOUTHERN UTAH UNIVERSITY CEDAR CITY, UT	DRAWING NO: LS-11
		DATE: 05/2003



3/4 " TO 2" PIPE SIZE

DRAWING: REDUCED PRESSURE BACKFLOW PREVENTER		
DEPARTMENT OF FACILITIES MANAGEMENT	SOUTHERN UTAH UNIVERSITY CEDAR CITY, UT	DRAWING NO: LS-12
		DATE: 05/2003

Bowen Collins & Associates, Inc. Consulting Engineers

PROFESSIONAL ENGINEER JOEL L. ANDRUS 5397020-2202 STATE OF UTAH

6.17.2010

NO	DATE	REV. BY	DESCRIPTION
			REVISIONS

DFCM

INTRAMURAL SOCCER FIELDS

CEDAR CITY, UTAH

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING

DESIGN J. ANDRUS | REVIEW K. BAGLEY

DRAWN B. ABEL | CHECKED J. ANDRUS | APPROVED

CIVIL

DETAILS–7

DATE JUNE 2010

PROJECT NUMBER 145-10-01

DRAWING NO. D-7

SHEET 14 OF 14

P:\SUU\sht\1451001_D07.dwg Jun13,2010 - 9:07pm